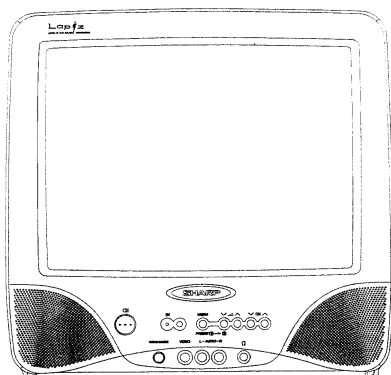


SHARP**SERVICE MANUAL**

SY0N2CX34AP1/


COLOUR TELEVISION
Chassis No. UA-1
MODEL CX34AP1

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

FEATURE

- Favourite Channel
- Full Auto Search System
- 100-CH Program Memory
- CATV(Hyper Band) Ready
- AVL Function
- High Contrast Picture (Black Stretch Circuit)
- On Timer/Sleep Timer/Reminder Timer
- Blue Back Noise Mute
- Front AV-In & Rear AV-In/Out Terminals
- Front Headphone Jack
- Colour Comb Filter (NTSC AV In)
- Hotel Mode
- Multi Language OSD
- Low Power Consumption (Standby Mode)
- AV Stereo
- Surround System
- Game Switch Function

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WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis. To prevent electric shock, do not remove cover. No user – serviceable parts inside. Refer servicing to qualified service personnel.

SHARP CORPORATION

SPECIFICATIONS

Convergence	Self Convergence System
Focus	Electrostatic Focus High Bi-Potential
Sweep Deflection	Magnetic
Intermediate Frequencies	
Picture IF Carrier	38.9 MHz
Sound IF Carrier Frequency	33.4 MHz
5.5 MHz	34.47 MHz
Colour Sub-Carrier Frequency	
Power Input	220-240V AC 50/60 Hz
Power Consumption	62 W
Audio Power Output Rating	2.0 W × 2(RMS)
Speaker Size	5 × 9 cm (2 pcs)
Voice Coil Impedance	16 ohms at 400 Hz
Aerial Input Impedance	
VHF/UHF	75 ohms Unbalanced
Tuner Ranges	
•VHF-Channels	(44.25 MHz thru 423.25 MHz)
•UHF-Channels	(431.25 MHz thru 863.25 MHz)
Dimensions	Width: 367.0 mm
	Height: 353.0 mm
	Depth: 377.0 mm
Weight (approx): 9 kg	
Cabinet material	All Plastics

Specifications are subject to change without prior notice.

IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be done by qualified service personnel only.

SERVICE OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by Connecting a 10K ohm Resistor in series with an insulated wire(such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute Minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:

1. When repairing the circuit, be sure not to increase the high voltage to more than 25.8kV (at beam 0 μA) for the set.
2. To keep the set in a normal operation , be sure to make it function on 22.8kV ±1.5kV (at beam 800 μA) in the case of the set. The set has been factory - Adjusted to the above-mentioned high voltage.
∴ If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety Checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor- capacity networks, mechanical insulators etc.

ADJUSTMENT PRECAUTIONS

This model's setting are adjusted in two different ways: through the I²C bus control and in the conventional analog manner. The adjustments via the I²C bus control include preset-only items and variable data.

1. Setting the service mode by the microprocessor.

- ① Short JA 122 & JA 124 for 1 second and release to switch to the service mode position, and the microprocessor is in input mode. (Adjustment through the I²C bus control). (Use JWS Key to set as well).
- ② Press the CH DOWN / UP key on the remote controller to get ready to select the mode one by one.
- ③ Press the CH DOWN / UP key on the remote controller to select the modes reversibly one by one.
- ④ Using the VOLUME UP/ DOWN key on the remote controller, the data can be modified.
- ⑤ Short JA 122 & JA 124 for 1 second and release to switch to the normal mode (OFF) position, and the microprocessor is in out of the service mode.

2. Factory Presetting.

- ① Short JA 122 & JA 124 for 1 second and release to switch to the service mode position and turn on the main power switch. Initial values are automatically preset, only when a new EEPROM is used (Judge with the first 4 bytes).
- ② The initial data are preset as listed in page 5, 6, & 7.
- ③ Make sure the data need modify or not (Initial data).

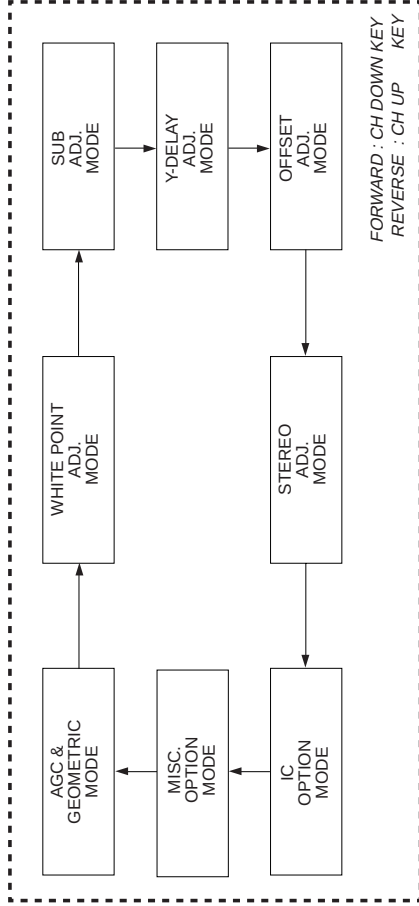
Note: Once the chassis has been assembly together and ready to be POWER ON for the FIRST TIME, make sure to short JA122 & JA124 to switch to the service mode position first and then turn on the main power switch (See 2-① above).

Precaution: If haven't done this initiation, it may possibly generate excessive Beam current.

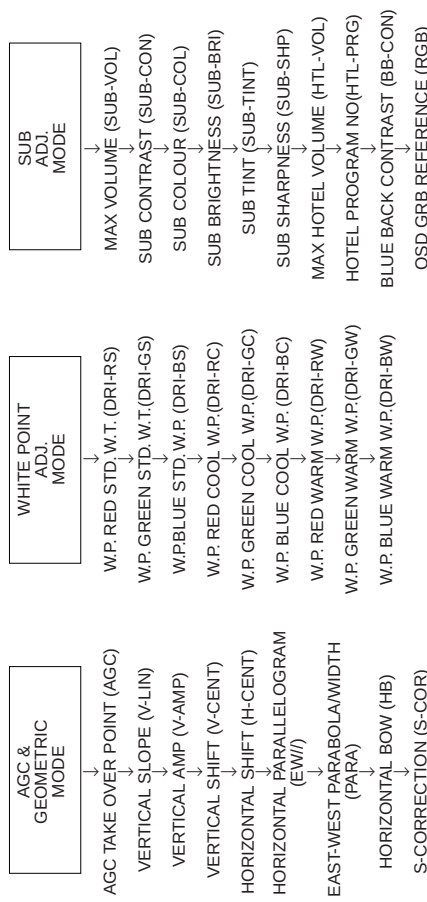
3. For reference please check with memory map (UA1 Series type RH-IX3410CE Attachment)

SERVICE MODE

- (1) In the Service Mode, Key is used to select the mode in the following order.



FORWARD : CH DOWN KEY
REVERSE : CH UP KEY



FORWARD : CH DOWN KEY
REVERSE : CH UP KEY
* () means OSD display.

Y-DELAY
ADJ.
MODE

- *Y-D : Y-DELAY
- Y-D TIME FOR PAL (TV) (DL-PT)
- Y-D TIME FOR SECAM (TV) (DL-ST)
- Y-D TIME FOR N358 (TV) (DL-3T)
- Y-D TIME FOR N443 (TV) (DL-4T)
- Y-D TIME FOR BW (TV) (DL-TV)
- Y-D TIME FOR PAL (AV) (DL-PA)
- Y-D TIME FOR SECAM (AV) (DL-SA)
- Y-D TIME FOR N358 (AV) (DL-3A)
- Y-D TIME FOR N443(AV) (DL-4A)
- Y-D TIME FOR BW (AV) (DL-AV)

IC
OPTION
MODE

- VERTICAL SCAN DISABLE(VSD)
- BLACK STRETCH (BKS)
- AUTO VOLUME LEVELING(AVL)
- FAST FILTER (F-PL)(FFI)
- ENABLE VERTICAL GUARD (EVG)
- EHT TRACKING MODE (EHT)
- OVERSCAN SWITCH OFF(OSO)
- AUTO COLOUR LIMIT(ACL)
- FORCED COLOUR LIMIT(FCO)

MISC.
OPTION
MODE

- SOUND SYSTEM M (S-M)
- SOUND SYSTEM DK (S-DK)
- SOUND SYSTEM I (S-I)
- SOUND SYSTEM BG (S-BG)
- PLAYBACK SECAM (P-SECAM)
- FE (RF) NTSC 3.58 (F-N358)
- FE (RF) NTSC 4.43 (F-N443)

OFFSET
ADJ.
MODE

- COLOUR OFFSET (PAL) (COL-OP)
- COLOUR OFFSET (SECAM) (COL-OS)
- COLOUR OFFSET (NTSC358) (COL-O3)
- COLOUR OFFSET (NTSC443) (COL-O4)
- SHARPNESS OFFSET (PAL) (SHP-OP)
- SHARPNESS OFFSET (SECAM) (SHP-OS)
- SHARPNESS OFFSET (NTSC358) (SHP-O3)
- SHARPNESS OFFSET (NTSC443) (SHP-O4)

FE (RF) SECAM (F-SECAM)

- VIDEO MUTE AT IDENT LOSS (VMI)
- VIDEO MUTE AT PROGRAM /SOURCE CHANGE (VMC)
- HOTEL MODE (HTL)
- REDUCED FM DEMODULATION GAIN FOR BTSC SIGNAL (BTSC)
- NUMBER OF EXT AV SOURCE (AV)
- FM WINDOW SELECTION (FMWS)
- SOUND MUTE BIT 0 (SM0)
- SOUND MUTE BIT 1 (SM1)
- THAI LANGUAGE (THA)
- ARABIC LANGUAGE (ARA)
- MALAY LANGUAGE (MAL)
- CHINESE LANGUAGE (CHI)
- FRENCH LANGUAGE (FRE)
- RUSSIAN LANGUAGE (RUS)
- FORCED V-SYNC SLICING LEVEL(FSL)
- SYNC OF OSD (HP2)
- IF AGC SPEED BIT 0 (AGC0)

SOUND PROCESSOR AND
STEREO ADJ. MODE

- BASS MIX FOR ANXXXX (BM.ON)
- BASS MIX AFFECT FOR ANXXXX (BM.EFF)
- AGC FOR ANXXXX (AGC.ON)
- AGC ADJUST FOR ANXXXX (AGC.ADJ)
- NICAM AGC (AGC.N)
- NICAM AGC GAIN ADJ (GAIN.N)
- FM OUTPUT LEVEL (FM.LV)
- IGR OUTPUT LEVEL (IGR.LV)
- NICAM OUTPUT LEVEL BIG (BG.NLV)
- NICAM OUTPUT LEVEL I (I.NLV)
- NICAM OUTPUT LEVEL D/K (DK.NLV)
- NICAM LOWER ERR LIMIT (LOW.ERR)
- NICAM UPPER ERR LIMIT (UP.ERR)
- IGR STR R CH GAIN ADJ (IGR.STR)

IF AGC SPEED BIT 1 (AGC1)

- FOA Time Constant-RF (FOA-FE)
- FOB Time Constant-RF (FOB-FE)
- FOA Time Constant-AV (FOA-AV)
- FOB Time Constant-AV (FOB-AV)
- TELETEXT (TXT)
- TEXT WEST OR EURO CHAR (TXT_WIE)
- TEXT PAN-EURO LANG (TXT-EUR)
- IF FREQ SELECTION (IF_38_0)
- CHARGE PUMP (CP)
- AN5890 ON (AN5890)
- AN5891 ON (AN5891)
- AN7396 ON (AN7396)
- NICAM DECODING (NICAM)
- IGR DECODING (IGR)
- GAME MODE (GAME)
- BILINGUAL (BIL)

USER DATA IN SERVICE MODE

*While SERVICE mode ON, EEPROM DATA will switch to the service data.
Also, once SERVICE mode OFF, EEPROM will switch back to previous USER DATA.
*In the service mode, the user data establish as below,

USER DATA	
CONTRAST	MAX
COLOUR	CENTER
BRIGHTNESS	CENTER
TINT	CENTER
SHARPNESS	CENTER
WHITE TEMP	STANDARD
S-VOLUME	MAX
BLUE BACK	OFF
C-SYSTEM	AUTO
S-SYSTEM	B/G

The flow of Mode lists as following.

* Direct Key-in Step1 Mode

RC COMMAND	SERVICE-ITEM
STANDBY/ON	STANDBY
TV/VIDEO	NEXT SOURCE
DIGIT 0°	DIGIT 0 - 9
AV1	SELECT AV1
AV2	SELECT AV2
-/--	1/2 DIGIT ENTRY
FUNCTION FSET	AGC
TIMER TSET	SUB-VOL
TXT/IMIX	DRI-GS
PIC	DRI-BS
HOLD	DRI-GC
CANCEL	DRI-GW
SIZE	DRI-RC
REVEAL	DRI-BW
RED	CUT-R
GREEN	CUT-G
BLUE BACK	S-COR
S-SYSTEM	HB
CONTRAST+	SUB-CON
CONTRAST-	V-LIN
COLOUR+	SUB-COL
COLOUR-	V-AMP
BRIGHTNESS+	SUB-BRI
BRIGHTNESS-	V-CENT
TINT+	SUB-TINT
TINT-	H-CENT
SHARPNESS+	SUB-SHP
SHARPNESS-	EWI
BASS+	TRAPE
BASS-	COR (L)
TREBLE+	PARA
TREBLE-	COR (U)

AFTER SHORT JA 122 & JA 124, AND TURN ON THE MAIN POWER SWITCH, READ DATA FROM EEPROM ADDRESS 00H ~ 03H, AND COMPARE TO THE LIST BELOW. IF DIFFERENT, INITIALIZE THE EEPROM.

ADDRESS : DATA ADDRESS : DATA
00H : 55H 02H : 53H
01H : 41H 03H : 54H

EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ	REMARK
AGC TAKE OVER POINT	AGC	0-63	14	ADJ	
VERTICAL SLOPE	V-LIN	0-63	32	ADJ	
VERTICAL AMPLITUDE	V-AMP	0-63	32	ADJ	
VERTICAL SHIFT	V-CENT	0-63	32	ADJ	
HORIZONTAL SHIFT	H-CENT	0-63	32	ADJ	
HORIZONTAL SIZE	H-SIZE	0-63	32	FIX	NO EFFECT
HORIZONTAL PARALLEL LOGRAM	EW//	0-63	32	FIX	NO EFFECT
EAST-WEST PARABOLA WIDTH	PARA	0-63	32	FIX	NO EFFECT
CORRECTION UPPER	COR (U)	0-63	32	FIX	NO EFFECT
CORRECTION LOWER	COR (L)	0-63	32	FIX	NO EFFECT
TRAPEZIUM	TRAPE	0-63	32	FIX	NO EFFECT
HORIZONTAL BOW	HB	0-63	32	FIX	NO EFFECT
S-CORRECTION	S-COR	0-63	0	FIX	
WHITE POINT RED STD WHITE TEMP	DRI-RS	0-63	32	FIX	
WHITE POINT GREEN STD WHITE TEMP	DRI-GS	0-63	32	ADJ	
WHITE POINT BLUE STD WHITE TEMP	DRI-BS	0-63	32	ADJ	
WHITE POINT RED WARM WHITE TEMP	DRI-RW	0-63	32	FIX	
WHITE POINT GREEN WARM WHITE TEMP	DRI-GW	0-63	32	FIX	(DRI-GS)-7 DATA
WHITE POINT BLUE WARM WHITE TEMP	DRI-BW	0-63	32	FIX	(DRI-BS)-7 DATA
WHITE POINT RED COOL WHITE TEMP	DRI-RC	0-63	25	FIX	(DRI-RS)-7 DATA
WHITE POINT GREEN COOL WHITE TEMP	DRI-GC	0-63	32	FIX	(DRI-GS)-7 DATA
WHITE POINT BLUE COOL WHITE TEMP	DRI-BC	0-63	32	FIX	(DRI-BS)-7 DATA
MAX VOLUME	SUB-VOL	0-60	60	FIX	
SUB CONTRAST	SUB-CON	0-63	63	FIX	*5
SUB COLOUR	SUB-COL	0-63	32	ADJ	
SUB BRIGHTNESS	SUB-BRI	0-63	32	ADJ	
SUB TINT	SUB-TINT	0-63	32	ADJ	
SUB SHARPNESS	SUB-SHP	0-63	32	FIX	*6
MAX HOTEL VOLUME	HTL-VOL	0-60	30	FIX	*1
HOTEL PROGRAM NUMBER	HTL-PRG	0-99 OR 99 FOR NONE	255	FIX	
BLUE BACK CONTRAST	BB-CON	0-15	10	FIX	
OSD RGB REFERENCE	RGB	0-15	15	FIX	
BLACK LEVEL OFF-SET R	CUT-R	0-15	8	ADJ	
BLACK LEVEL OFF-SET G	CUT-G	0-15	8	ADJ	
CATHODE DRIVE LEVEL	GDL	0-15	0	FIX	
Y-DELAY TIME FOR PAL (TV) [YD]	DL-PT	0-15	12	FIX	
Y-DELAY TIME FOR SECAM (TV) [YD]	DL-ST	0-15	15	FIX	
Y-DELAY TIME FOR N358 (TV) [YD]	DL-3T	0-15	12	FIX	
Y-DELAY TIME FOR N443 (TV) [YD]	DL-4T	0-15	12	FIX	
Y-DELAY TIME FOR BW (TV) [YD]	DL-TV	0-15	12	FIX	
Y-DELAY TIME FOR PAL (AV) [YD]	DL-PA	0-15	12	FIX	
Y-DELAY TIME FOR SECAM (AV) [YD]	DL-SA	0-15	15	FIX	
Y-DELAY TIME FOR N358 (AV) [YD]	DL-3A	0-15	12	FIX	
Y-DELAY TIME FOR N443 (AV) [YD]	DL-4A	0-15	12	FIX	
Y-DELAY TIME FOR BW (AV) [YD]	DL-AV	0-15	12	FIX	
COLOUR OFF-SET (PAL)	COL-OP	0-15	8	FIX	*7
COLOUR OFF-SET (SECAM)	COL-OS	0-15	8	FIX	*7
COLOUR OFF-SET (NTSC358)	COL-O3	0-15	4	FIX	*7
COLOUR OFF-SET (NTSC443)	COL-O4	0-15	4	FIX	*7
SHARPNESS OFFSET (PAL)	SHP-OP	0-15	8	FIX	
SHARPNESS OFFSET (SECAM)	SHP-OS	0-15	4	FIX	

5-1

EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ	REMARK
SHARPNESS OFFSET (NTSC358)	SHP-O3	0-15	12	FIX	
SHARPNESS OFFSET (NTSC443)	SHP-O4	0-15	8	FIX	
BASS MIX FOR ANXXXX	BM-ON	0(DISABLE)/(ENABLE)	0	FIX	
BASS MIX EFFECT FOR ANXXXX	BM-EFF	0-3	2	FIX	
AGC FOR ANXXXX	AGC-ON	0(DISABLE)/(ENABLE)	1	FIX	
AGC ADJUST FOR ANXXXX	AGC-ADJ	0-3	3	FIX	
NICAM AGC	AGC-N	0(DISABLE)/(ENABLE)	0	FIX	
NICAM AGC GAIN ADJ	GAIN-N	0-31	0	FIX	
FM OUTPUT LEVEL	FM-LV	0-30	15	FIX	
IGR OUTPUT LEVEL	IGR-LV	0-30	16	FIX	
NICAM OUTPUT LEVEL (B/G)	B/G-NLV	0-30	13	FIX	
NICAM OUTPUT LEVEL (I)	I-NLV	0-30	18	FIX	
NICAM OUTPUT LEVEL (D/K)	D/K-NLV	0-30	13	FIX	
NICAM LOWER ERROR LIMIT	LOW ERR	0-255	35	FIX	
NICAM UPPER ERROR LIMIT	UP ERR	0-255	70	FIX	
IGR STEREO R GH GAIN ADJUST	IGR-STR	0-13	6	FIX	
VERTICAL SCAN DISABLE	VSD	0(DISABLE)/(ENABLE)	0	FIX	
BLACK STRETCH	BKS	0(DISABLE)/(ENABLE)	1	FIX	
AUTOMATIC VOLUME LEVELING	AVL	0(DISABLE)/(ENABLE)	1	FIX	
FAST FILTER IF-PLL	FFI	0(DISABLE)/(ENABLE)	0	FIX	
ENABLE VERTICAL GUARD (RGB BLANKING)	EVG	0(DISABLE)/(ENABLE)	1	FIX	ONLY BLK
EHT TRACKING MODE (HCO)	EHT	0(DISABLE)/(ENABLE)	1	FIX	
OVERSCAN SWITCH OFF	OSO	0(DISABLE)/(ENABLE)	0	FIX	
AUTO COLOUR LIMIT	ACL	0(DISABLE)/(ENABLE)	0	FIX	
FORCED COLOUR LIMIT	FCO	0(DISABLE)/(ENABLE)	0	FIX	
SOUND SYSTEM M	S-M	0(DISABLE)/(ENABLE)	0	FIX	
SOUND SYSTEM DK	S-DK	0(DISABLE)/(ENABLE)	1	FIX	*8
SOUND SYSTEM I	S-I	0(DISABLE)/(ENABLE)	1	FIX	*8
SOUND SYSTEM BG	S-BG	0(DISABLE)/(ENABLE)	1	FIX	
PLAYBACK SECAM	P-SECAM	0(DISABLE)/(ENABLE)	1	FIX	*8
FE (RF) NTSC 3.58	F-N358	0(DISABLE)/(ENABLE)	0	FIX	
FE (RF) NTSC 4.43	F-N443	0(DISABLE)/(ENABLE)	1	FIX	*8
VIDEO MUTE AT IDENT LOSS	F-SECAM	0(DISABLE)/(ENABLE)	1	FIX	
VIDEO MUTE AT PROGRAM/SOURCE CHANGE	VMI	0(DISABLE)/(ENABLE)	1	FIX	
HOTEL MODE	VMC	0(DISABLE)/(ENABLE)	1	FIX	
REDUCED FM DEMODULATOR GAIN FOR BTSC SIGNAL	HTL	0(DISABLE)/(ENABLE)	0	FIX	
NUMBER OF EXTERNAL AV SOURCE	BTSC	0(DISABLE)/(ENABLE)	0	FIX	
FM WINDOW SELECTION	AV	0 FOR 1 AVI FOR 2AV	1	FIX	
SOUND MUTE BIT 0	FMWS	0(DISABLE)/(ENABLE)	0	FIX	
SOUND MUTE BIT 1	SM0	0(DISABLE)/(ENABLE)	1	FIX	
THAI LANGUAGE	SM1	0(DISABLE)/(ENABLE)	0	FIX	
ARABIC LANGUAGE	THA	0(DISABLE)/(ENABLE)	0	FIX	
MALAY LANGUAGE	ARA	0(DISABLE)/(ENABLE)	1	FIX	
CHINESE LANGUAGE	MAL	0(DISABLE)/(ENABLE)	1	FIX	
FRENCH LANGUAGE	CHI	0(DISABLE)/(ENABLE)	1	FIX	
RUSSIAN LANGUAGE	FRE	0(DISABLE)/(ENABLE)	1	FIX	
FORCED V-SYNC SLICING LEVEL	RUS	0(DISABLE)/(ENABLE)	1	FIX	
SYNC OF OSD	FSL	0(DISABLE)/(ENABLE)	0	FIX	
IF AGC SPEED BIT 0	HP2	0(DISABLE)/(ENABLE)	0	FIX	
IF AGC SPEED BIT 1	AGC0	0(DISABLE)/(ENABLE)	1	FIX	
PHI-1 TIME CONSTANT (RF)	AGC1	0(DISABLE)/(ENABLE)	0	FIX	
PHI-1 TIME CONSTANT (RF)	FOA-FE	0(DISABLE)/(ENABLE)	0	FIX	
PHI-1 TIME CONSTANT (OFF AIR)	FOB-FE	0(DISABLE)/(ENABLE)	1	FIX	
PHI-1 TIME CONSTANT (OFF AIR)	FOA-AV	0(DISABLE)/(ENABLE)	1	FIX	
TELETEXT	FOB-AV	0(DISABLE)/(ENABLE)	1	FIX	
TELETEXT WESTERN OR EASTERN CHAR	TXT	0(DISABLE)/(ENABLE)	0	FIX	
TELETEXT PAN-EURO LANG	TXTWIE	0(WESTERN)/(EASTERN)	0	FIX	
	TXT-EUR	0(EURO)/(OTHER)	0	FIX	

5-2

SHIPPING SETTING & CHECKING

(1) The following default data has been factory-set for the E²PROM.

ITEMS	DATA SETTING
LAST PROGRAM/CHANNEL	1
FLASHBACK PROGARM/CH	1
DIGIT	2
C-SYSTEM	AUTO
S-SYSTEM	*1
SKIP	OFF
AFC	ON
VOLUME	1
CONTRAST	60 (MAX)
COLOUR	0 (CENTER)
BRIGHTNESS	0 (CENTER)
TINT	0 (CENTER)
SHARPNESS	0 (CENTER)
WHITE TEMP	STANDARD
REMINDER TIMER	In-active, "----"
ONTIMER	In-active, "----"
OFF TIMER	In-active, "----"
LAST POWER	POWER-ON
LANGUAGE	*1
BLUE BACK MUTE	ON
HOTEL MODE	OFF
0 CHANNEL SKIP	ON
LAST TV/AV	TV
BASS/TRE/BAL	CENT
SURROUND	OFF
SURROUND LEVEL	CENT

*1 : Please refer defaults for LANGUAGE and SOUND SYSTEM per MODEL as follows;

MODEL	LANGUAGE	SOUND SYSTEM	FACTORY SETTING KEY
CX34AP1	ENGLISH	B/G	8

NOTE : AFTER PRESSING MODEL SETTING, 0 CHANNEL WILL BE SKIPPED.

FACTORY SETTING BY MODEL
(Reference : Geomagnetism Adjustment)

MODEL	MAGNETIC FIELD (V, H) nT		BACKGROUND	LANGUAGE	S-SYSTEM	LANG. QTY.
CX34AP1	-50,000	20,000	12,300°K	ENGLISH	B/G	6

OSD LANGUAGE : ENGLISH/CHINESE/FRENCH/ARABIC/MALAY/RUSSIAN

EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ	REMARK
IF FREQ SELECTION	IF_38_0	0(38.9)(138.0)	0	FIX	
CHARGE PUMP	CP	0(DISABLE)/(ENABLE)	0	FIX	*2
AN5890 PRESENT	AN5890	0(DISABLE)/(ENABLE)	1	FIX	*3
AN5891 PRESENT	AN5891	0(DISABLE)/(ENABLE)	0	FIX	*4
AN7396 PRESENT	AN7396	0(DISABLE)/(ENABLE)	0	FIX	
NICAM DECODING ENABLED	NICAM	0(DISABLE)/(ENABLE)	0	FIX	
IGR DECODING ENABLED	IGR	0(DISABLE)/(ENABLE)	0	FIX	
GAME MODE ENABLED	GAME	0(DISABLE)/(ENABLE)	0	FIX	*2
BILINGUAL	BIL	0(DISABLE)/(ENABLE)	0	FIX	

NOTE(*) :

Fix data, please do not change without specific instruction.

*1 : UNLESS CUSTOMER REQUEST, OR ELSE PLEASE FIX THE ADJUSTMENT"

*2 : MANUAL CHANGE TO '1'.

*3 : SWITCH OFF AN 5890 (MANUAL CHANGE TO '0')

*4 : SWITCH ON AN 5891 (MANUAL CHANGE TO '1')

*5 : SUB-CON CHANGE FROM 63 TO 50 (HONG KONG MODEL ONLY)

*6 : SUB-SHP CHANGE FROM 32 TO 20

*7 : AFTER ADJ SUB-COLOUR THEN CHANGE 1. COL-OP FROM 8 TO 12
 2. COL-OS FROM 8 TO 12 (EXCEPT CX34AP1(S))
 3. COL-O3 FROM 4 TO 8
 4. COL-O4 FROM 4 TO 8

*NOTE : PLEASE AWARE THAT WHILE ADJ SUB-COL, UPON THOSE FOUR ITEMS SHOULD BE IN INITIAL CONDITION.

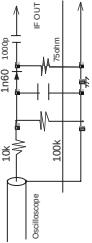
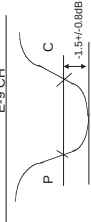
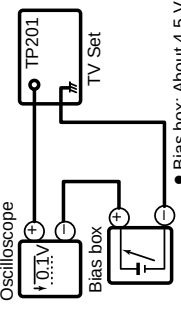
*8 : MANUAL CHANGE TO '0' [AUSTRALIA MODEL ONLY : CX34AP1(S)]

GAME MODE DEFAULT VALUE

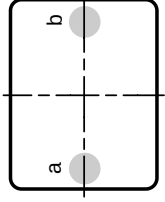
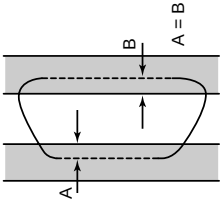
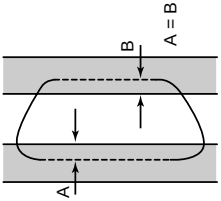
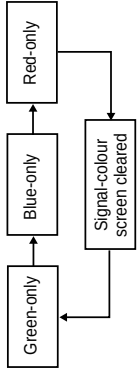
STORE THESE DATA IN THE EEPROM FOR GAME MODE DEFAULT VALUE

ITEM	EEPROM ADDRESS (HEX)	INITIAL DATA (HEX)	GAME DEFAULT DATA (HEX)
GAME BALANCE	251	1E	1E
GAME BASS	252	1E	2D
GAME TREBLE	253	1E	32
GAME SURROUND ON	254	00	01
GAME SURROUND LEVEL	255	1E	0A
GAME SPATIALIZER ON	256	00	00
GAME SPATIALIZER LEVEL	257	1E	1E
GAME CONTRAST	259	3C	28
GAME COLOUR	25A	1E	28
GAME BRIGHTNESS	25B	1E	1E
GAME TINT	25C	1E	1E
GAME SHARPNESS	25D	1E	32
GAME WHITE TEMP	25E	00	01

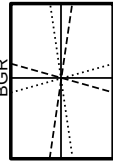
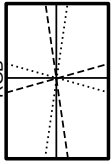
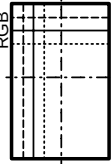
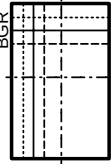
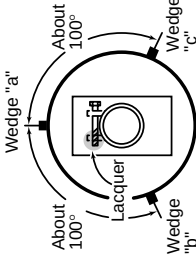
PIF ADJUSTMENT CHECKING

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	Tuner IFT (PRESET)	- Get the tuner ready to receive the CH. E - 9 signal, but with no signal input. - Connect the sweep generator's output cable to the tuner antenna. (RF SWEEP) - Adjust the sweep generator's to 80 dBμV - Connect the response lead (use LOW IMPEDANCE probe with wave detector ; see Fig.1) to the tuner's IF output terminal. (This terminal must have the probe alone connected). - Set the RF AGC to 0 - 6 V with no saturation with the waveform. - Adjust the tuner IF coil to obtain the waveform as shown in Fig. 2. Note: Be sure to keep the tuner cover in position during this adjustment.	 Fig. 1  Fig. 2
2	RF-AGC TAKE OVER POINT ADJUSTMENT (I'C BUS CONTROL)	- Receive "PAL COLOUR BAR" signal. Signal Strength: 57 ± 1 dBμV (75 ohm open) - Connect the oscilloscope to TP201 (Tuner's AGC Terminal) as shown in Fig. 3. - Call "AGC" mode in service mode. Adjust the "AGC" bus data to get the maximum voltage at TP201. Reduce 1 data from the maximum voltage. - Change the antenna input signal to 63-67 dBμV, and make sure there is no noise. - Turn up the input signal to 90-95 dBμV to be sure that there is no cross modulation beat.	Note: For the 50 ohm signal strength gauge, when not using 50/75 impedance adapter, signal strength is 52$\pm$1 dBμV (75 ohms open), instead of 57$\pm$1 dBμV (75 ohms open). Precaution: The loss of using impedance adapter.  Fig. 3

PURITY ADJUSTMENT

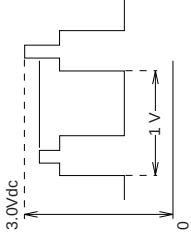
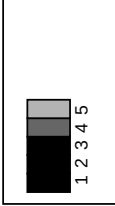
No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	PURITY ADJUSTMENT	- Receive the GREEN-ONLY signal. Adjust the beam current to over 500 μA - Degauss the CRT. Maintain the purity magnet at the zero magnetic field and keep the static convergence roughly adjusted. - Observe the points a, b, as shown in Fig. 4-1 through the microscope. Adjust the landings to the A rank requirements. - Orient the raster rotation to 0 eastward. - Tighten up the deflection coil screws. - Tightening torque: 108 N $\pm$ 20 N (11 kgf $\pm$ 2 kgf) - Make sure the CRT corners landing meet the A rank requirements. If not, stick the magnet sheet to correct it. Note 1) This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 500 μA. 2) Purity and Convergence adjustments must be done in below Magnetic Field condition.	 Fig. 4-1  Fig. 4-2 Rank "A" (On the right of the CRT)  Fig. 4-3 Rank "A" (On the left of the CRT) * For the following colours press R/C RGB key to change.  * Press R/C RGB key for 1 second in NORMAL MODE, the colour will change to RGB mono colour mode.

CONVERGENCE ADJUSTMENT

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	CONVERGENCE ADJUSTMENT (To be done after the purity adjustment.)	1. Receive the "Crosshatch Pattern" signal. 2. Using the remote controller, call NORMAL mode. STATIC CONVERGENCE 1. Turn the 4-pole magnet to a proper opening angle in order to superpose the blue and red colours. 2. Turn the 6-pole magnet to a proper opening angle in order to superpose the green colour over the blue and red colours. DYNAMIC CONVERGENCE 1. Adjust the convergence on the fringes of the screen in the following steps. a) Fig. 5-1: Drive the wedge at point "a" and swing the deflection coil upward. b) Fig. 5-2: Drive the wedge at points "b" and "c" and swing the deflection coil downward. c) Fig. 5-3: Drive the "c" wedge deeper and swing the deflection coil rightward. d) Fig. 5-4: Drive the "b" wedge deeper and swing the deflection coil leftward. 2. Fix all the wedges on the CRT and apply glass tape over them. 3. Apply lacquer to the deflection yoke lock screw, magnet unit (purity, 4-pole, 6-pole magnets) and magnet unit lock screw. Finally received the Red-only and Blue-only signals to make sure there is no other colours on the screen.	 Fig. 5-1  Fig. 5-2  Fig. 5-3  Fig. 5-4 

8-1

CUT-OFF, BACKGROUND, SUB-CONTRAST ADJUSTMENT

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	CRT CUT-OFF ADJUSTMENT (I ² C BUS CONTROL)	1. Switch TV to AV mode, BLUE BACK OFF, with NO VIDEO signal. 2. Press R/C to set Picture Normal condition. 3. Connect the oscilloscope to Red OUT from IC801. (TP851) Range : 1 V/Div. (DC) Sweep : 5 msec/Div. 4. Adjust SCREEN VR, so that the tip of signal reach 3.0 Vdc + 0.1 Vdc.	
2	SUB-BRIGHTNESS ADJUSTMENT (I ² C BUS CONTROL)	1. Call " SUB-BRT" in service mode. (Receive Cross-hatch pattern with 5 black level windows) 2. Adjust the " SUB BRIGHT " bus data in order that the line 1 and 2 have the same darkness, whereas line 3 is slightly brighter than line 1 and 2, line 4 is slightly brighter than line 3 and finally line 5 is brighter than line 4.	 1 and 2 are in the same black level.
3	WHITE BALANCE SERVICE MODE ADJUSTMENT (I ² C BUS CONTROL)	1. Receive the "WHITE" pattern with BURST signal. 2. Press R/C to set Picture NORMAL condition. 3. Connect the DC milliammeter between the TP 602 (-) and TP 603 (+). 4. Check Beam current should be around 800 μA. 5. Set it to service mode and adjust the DRI-GS and DRI-BS data to have a colour temperature of 12,300 °K at HIGH BRIGHT CONDITION. * Note. 6. Adjust "CUT-R" & "CUT-G" to get 12,300 °K at LOW BRIGHT CONDITION. Then go back HIGH BRIGHT CONDITION to check colour temperature. If out of range, back to 1. Note: This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 500μA. * Adjust DRI-GC/GW, DRI-BC/BW as following data after finishing DRI-GS and DRI-BS. DRI-GC/GW DATA = "DRI-GS" - 7 DATA DRI-RC = 25; DRI-BC = DRI-BS; DRI-RW = 32 DRI-BW DATA = "DRI-BS" - 7 DATA	Refer to Page 5 / 20 FACTORY ADJ. SPEC. # 12300 °K X : 0.272 High adj spec 1.5 ins spec 1.6 Y : 0.275 Low adj spec 5.0 ins spec 30.0 (MINOLTA COLOUR ANALYZER CA-100) *NOTE: Above DATA can be UPI DOWN by volume key. 14" LOW HIGH 10cd/m2 200cd/m2
4	MAXIMUM BEAM CHECK	1. Receive the "Monoscope Pattern" signal. 2. Press R/C to set Picture NORMAL condition. 3. Connect the DC milliammeter between TP603 (+) and TP602 (-). (Full Scale: 3 mA Range) 4. Beam current must be within 800 ± 100 μA.	

8-2

HORIZONTAL, VERTICAL DEFLECTION LOOP AND FOCUS ADJUSTMENT

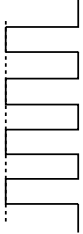
No.	Adjustment point	Adjustment condition / procedure	Waveform or others				
1	V-SLOPE (I'C BUS CONTROL)	1. Receive PAL 50 Hz Monoscope Pattern Signal. 2. Call the "V-LIN" mode. 3. Increase or decrease "V-LIN" by Volume key till the horizontal line in the center of monoscope is just at the position where the blanking starts.					
2	V-SHIFT (I'C BUS CONTROL)	1. Call the "V-CENT" mode. 2. Increase or decrease "V-CENT" by Volume key till the picture is centered.					
3	V - AMP (I'C BUS CONTROL)	1. Call the "V-AMP" mode. 2. Increase or decrease "V - AMP" by Volume key to set overscan of 8.5 % typical. Adjustment Spec 8.5 % range +1 % -0 %.					
4	S-CORRECTION (I'C BUS CONTROL)	FIXED DATA, NO NEED TO ADJUST.					
5	H - SHIFT (50) (H-CENTER) (I'C BUS CONTROL)	1. Call the "H-CENT" mode. 2. Increase or decrease "H-CENT" by Volume key to center the picture horizontal. Note : All the above adjustments also must be done in below Magnetic Field condition. <table border="1"><tr><td>MODEL</td><td>MAGNETIC FIELD (V, H) nT</td></tr><tr><td>CX34AP1</td><td>-50,000 20,000</td></tr></table>	MODEL	MAGNETIC FIELD (V, H) nT	CX34AP1	-50,000 20,000	
MODEL	MAGNETIC FIELD (V, H) nT						
CX34AP1	-50,000 20,000						
1	FOCUS	1. Receive the "Monoscope Pattern" signal. 2. Press R/C to set Picture NORMAL condition. 3. Adjust the focus control to get the best focusing.					

9

PAL CHROMA ADJUSTMENT (Continued)

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	SUB COLOUR (I'C BUS CONTROL) (Continued)	5. Clear the SERVICE mode. * Before adjust SUB-COL, COL-OP=8, COL-OS=8, COL-O3=4, COL-O4=4. After adjust SUB-COL, set COL-OP=12, COL-OS=12, COL-O3=8, COL-O4=8. * Note : For Australia model, no need to change COL-OS. (COL-OS=8)	

NTSC CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	SUB-TINT (I'C BUS CONTROL)	1. Receive the "NTSC3.58 Colour Bar" signal thru AV in. 2. Connect the oscilloscope to TP853 (P882 pin 5) BLUE-OUT. Range : 1 V/Div. (AC) (Use Probe 10:1) Sweep time : 10 µsec/Div. 3. Call the "SUB-TINT" mode in service mode. Adjust the "SUB-TINT" bus data to obtain the waveform shown as Fig. 9. 4. Clear the SERVICE mode.	 Fig. 9

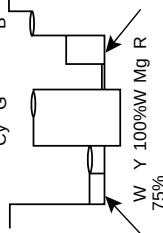
PROTECTOR OPERATION CHECKING

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	BEAM PROTECTOR	1. Receive "Monoscope Pattern" signal. 2. Set CONTRAST MAX. 3. Set BRIGHT MAX. 4. During the Collector & Emitter of Q883/57 short, make sure the protector ON and switch to standby mode.	* Select one of Q883/57 to do each short test.
2	H, V PROTECTOR	1. Receive "Monoscope Pattern" signal. 2. Connect output of Bias Box to D607 cathode (R606 side). 3. Set voltage of Bias Box to 18V and make sure the protector is not work. 4. Set voltage of Bias Box to 27V, and make sure the protector functions.	
3	OTHER PROTECTORS	1. Once finish rectified Electrolytic Capacitor short testing in +B line, check all possible damaged components on +B line. (Use random selected set for inspection)	

9-1

9-2

PAL CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	SUB COLOUR (I'C BUS CONTROL)	1. Receive the "PAL Colour Bar" signal. 2. Press R/C to set Picture Normal condition. 3. Connect the oscilloscope to Red cathode (TP851). Range : 1 V/Div. (AC) (Using 10:1 Probe) Sweep Time : 10 µsec/Div. 4. Using the R/C call "SUB COL" in SERVICE mode. Adjust SUB COLOUR bus data, so that the 75% White & Red portions of PAL Colour Bar be at the same level shown as Fig. 8.	 Fig. 8

A/V INPUT AND OUTPUT CHECKING

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	VIDEO AND AUDIO OUTPUT CHECK	1. Receive the "PAL Color Bar" signal (100 % White Color Bar, Sound 400 Hz 100 % Mod.) 2. Terminate the Video output with a 75 ohm impedance. Make sure the output is as specified (1.0 Vp-p $\pm$ 3 dB). 3. Terminate the Audio output with a 10 k ohm impedance. Make sure the output is as specified (1.76 Vp-p $\pm$ 3 dB).	
2	VIDEO AND AUDIO INPUT CHECK	1. Using the TV/VIDEO key on the remote controller, make sure that the modes change in order of TV, AV1, AV2, GAME & TV again and the video & audio output are according to the input terminal for each mode.	

FUNCTION OPERATION CHECKING (VIDEO & AUDIO)

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
1	CONTRAST Key	1. Receive "Monoscope Pattern" signal. 2. Set PICTURE MENU to select CONTRAST. 3. Press Volume Up/Down key to check whether the CONTRAST effect is OK or not.	
2	COLOUR Key	1. Receive "Color Bar" signal. 2. Set PICTURE MENU to select COLOUR. 3. Press Volume Up/Down key to check whether the COLOUR effect is OK or not.	
3	BRIGHTNESS Key	1. Receive "Monoscope Pattern" signal. 2. Set PICTURE MENU to select BRIGHTNESS. 3. Press Volume Up/Down key to check whether the BRIGHTNESS effect is OK or not.	
4	TINT Key	1. Receive the "NTSC Colour Bar" signal thru AV in. 2. Set PICTURE MENU to select TINT. 3. Press Volume Up/Down key to check TINT, UP for GREEN direction and DOWN for PURPLE direction whether is OK or not.	
5	SHARPNESS Key	1. Receive "Monoscope Pattern" signal. 2. Set PICTURE MENU to select SHARPNESS. 3. Press Volume Up/Down key to check whether the SHARPNESS effect is OK or not.	
6	CH DISPLAY COLOUR	1. All Ch (1-99) will have an OSD display of the channel number in green colour under AFT ON condition.	
7	NORMAL Key	1. Once in PICTURE/SOUND MENU, and the NORMAL key is pressed, all the settings will be present to normal setting. (Normal setting value for every mode).	Notes : If nothing happen on screen mean contrast, colour, bright, tint and sharpness are all in normal setting.

10-1

FUNCTION OPERATION CHECKING (VIDEO & AUDIO)
(Continued)

No.	Adjustment point	Adjustment condition / procedure	Waveform or others
7	NORMAL Key (continued)	CONTRAST : MAX COLOUR : CENTER BRIGHTNESS : CENTER TINT : CENTER SHARPNESS : CENTER WHITE TEMP : STANDARD TREBLE : CENTER BASS : CENTER SURROUND : OFF SURROUND LEVEL : CENTER BALANCE : CENTER	
8	WHITE TEMP	1. Receive "Monoscope Pattern" signal. 2. Set PICTURE MENU to select WHITE TEMP. 3. Press Volume Up/Down key to check WHITE TEMP Option, STANDARD: NORMAL SETTING, WARM for more REDDISH direction changing, COOL for more BLUISH direction changing.	
9	COLOUR SYSTEM	1. Receive the "PAL COLOUR BAR" signal, press the COLOUR SYSTEM key to select modes except PAL, check the COLOUR is not working properly. Then, select the "PAL" mode. Check again its colour so that it is working properly. 2. Receive "SECAM COLOUR BAR" signal, select COLOUR SYSTEM key to select modes except SECAM, check the COLOUR is not working properly. Then, select the "SECAM" mode. Check again its colour so that it is working properly. 3. Receive "NTSC4.43/3.58 COLOUR BAR" signal thru AV, select COLOUR SYSTEM key to select modes except N4.43/3.58, check the COLOUR is not working properly. Then, select the "NTSC 4.43/3.58" mode. Check again its colour so that it is working properly.	Note : For Australia model, please do procedure No. 1 and 3 only.
10	SOUND SYSTEM	1. Receive "PAL-D/K" signal, select "SOUND SYSTEM" turn to B/G, I. Check the sound output is not working properly. Select D/K and check the sound output to make sure it is working properly. 2. Receive "PAL-I" signal, select "SOUND SYSTEM" turn to B/G, D/K. Check the sound output is not working properly. Select I and check the sound output to make sure it is working properly. 3. Receive "PAL-B/G" signal, select "SOUND SYSTEM" turn to I, D/K. Check the sound output is not working properly. Select B/G and check the sound output to make sure it is working properly.	Note : For Hong Kong and Singapore models only. [14AP1-S(S) and 14AP1-W(S)]
11	NOISE MUTE CHECKING	1. Receive "PAL COLOUR BAR" signal. 2. Turn up the volume control to maximum, make sure the sound is heard from the speakers. Then put the unit in no signal state. 3. Check the sound mute is effective. 4. Finally turn sound level of CTV to minimum.	

10-2

ADDRESS (HEX)	D7	D6	D5	D4	D3	D2	D1	D0	MICON DEFAULT	E ^{PROM} RANGE	CHASSIS CHECK DATA CHECK TYPE	CTV FINAL CHECK DATA CHECK TYPE	LAST INITIAL SETTING DATA	REMARK
40									04	00-0F				
41									0C	00-0F				
42									08	00-0F				
43														
44														
45														
46									00	00-01				
47									02	00-0F				
48									01	00-01				
49									03	00-0F				
4A														
4B														
4C														
4D									00	00-1F				
4E									0F	00-1E				
4F									10	00-1E				
50									0D	00-1E				
51									12	00-1E				
52									0D	00-1E				
53									23	00-FF				
54									06	00-FF				
55									0A	00-0F				
56									14	00-0F				
57									1B	00-FF				
58									DE	00-FF				
59									53	00-FF				
5A									3E	00-FF				
5B									31	00-FF				
5C									08	00-FF				
5D									00	00-FF				
5E									01	00-3C				
60									1E	00-3C				
62									1E	00-3C				
63									1E	00-3C				
64									00	00-02				
65									1E	00-3C				
66									1E	00-02				
67									1E	00-3C				
68									3C	00-3C				
69									1E	00-3C				
6A									1E	00-3C				
6B									1E	00-3C				
6C									1E	00-3C				
6D									00	00-02				
6E														
6F									1E	00-3C				
70									1E	00-3C				
71									1E	00-3C				
72									00	00-02				
73									1E	00-3C				
74									00	00-02				
75									1E	00-3C				
76									3C	00-3C				
77									1E	00-3C				
78									1E	00-3C				
79									1E	00-3C				
7A									1E	00-3C				
7B									00	00-02				
7C									00	00-02				
7D														
7E									01	00-FF				
MODEL										MODEL				
LETTER NO.										LETTER NO.				

ADDRESS (HEX)	D7	D6	D5	D4	D3	D2	D1	D0	MICON DEFAULT	E ^{PROM} RANGE	CHASSIS CHECK DATA CHECK TYPE	CTV FINAL CHECK DATA CHECK TYPE	LAST INITIAL SETTING DATA	REMARK
80									0A	00-FF				
81									1E	00-FF				
82									14	00-FF				
83									28	00-FF				
84														
85									01	00-01				
86									00	00-01				
87									00	00-01				
88									00	00-06				
89									80	00-01				
8A														
8B														
8C									00	00-4D				
8D									00	00-4D				
8E									FF	00-FF				
8F									00	00-01				
90														
91														
92									80	00-FF				
93									80	00-FF				
94									00	00-FF				
95									00	00-FF				
96									00	00-FF				
97									00	00-FF				
98									00	00-FF				
99									00	00-FF				
9A									00	00-FF				
9B									00	00-FF				
9C									00	00-FF				
9D									00	00-FF				
9E									00	00-FF				
9F									00	00-FF				
A0														
A1														
A2									FF	00-FF				
A3									FF	00-FF				
A4									FF	00-FF				
A5									FF	00-FF				
A6									FF	00-FF				
A7									FF	00-FF				
A8									FF	00-FF				
A9									FF	00-FF				
AA									FF	00-FF				
AB									FF	00-FF				
AC									FF	00-FF				
AD									FF	00-FF				
AE									FF	00-FF				
AF														
B0														
B1									FF	00-FF				
B2									FF	00-FF				
B3									FF	00-FF				
B4									FF	00-FF				
B5									FF	00-FF				
B6									FF	00-FF				
B7									FF	00-FF				
B8									FF	00-FF				
B9									FF	00-FF				
BA									FF	00-FF				
BB									FF	00-FF				
BC									FF	00-FF				
BD									FF	00-FF				
BE									FF	00-FF				
BF														
MODEL										MODEL				
LETTER NO.										LETTER NO.				

13-1

13-2

ADDRESS (HEX)	DATA							MICON DEFAULT	E'FROM RANGE	E'FROM WRITE(OUT)	CHASSIS	CTV FINAL	LAST INITIAL	REMARK
	D7	D6	D5	D4	D3	D2	D1							
140	S-SYS		AFT		(uid)		C-SYS	10						POS 13
141	TUNING FREQUENCY (HIGHER PART)													
142	TUNING FREQUENCY (LOWER PART)													
143	S-SYS		AFT		(uid)		C-SYS	10						POS 14
144	TUNING FREQUENCY (HIGHER PART)													
145	TUNING FREQUENCY (LOWER PART)													
146	S-SYS		AFT		(uid)		C-SYS	10						
147	TUNING FREQUENCY (HIGHER PART)													
148	TUNING FREQUENCY (LOWER PART)													
149	S-SYS		AFT		(uid)		C-SYS	10						POS 15
14A	TUNING FREQUENCY (HIGHER PART)													POS 16
14B	TUNING FREQUENCY (LOWER PART)													
14C	S-SYS		AFT		(uid)		C-SYS	10						POS 17
14D	TUNING FREQUENCY (HIGHER PART)													
14E	TUNING FREQUENCY (LOWER PART)													
14F	S-SYS		AFT		(uid)		C-SYS	10						POS 18
150	TUNING FREQUENCY (HIGHER PART)													
151	TUNING FREQUENCY (LOWER PART)													
152	S-SYS		AFT		(uid)		C-SYS	10						POS 19
153	TUNING FREQUENCY (HIGHER PART)													
154	TUNING FREQUENCY (LOWER PART)													
155	S-SYS		AFT		(uid)		C-SYS	10						POS 20
156	TUNING FREQUENCY (HIGHER PART)													
157	TUNING FREQUENCY (LOWER PART)													
158	S-SYS		AFT		(uid)		C-SYS	10						POS 21
159	TUNING FREQUENCY (HIGHER PART)													
15A	TUNING FREQUENCY (LOWER PART)													
15B	S-SYS		AFT		(uid)		C-SYS	10						POS 22
15C	TUNING FREQUENCY (HIGHER PART)													
15D	TUNING FREQUENCY (LOWER PART)													
15E	S-SYS		AFT		(uid)		C-SYS	10						POS 23
15F	TUNING FREQUENCY (HIGHER PART)													
160	TUNING FREQUENCY (LOWER PART)													
161	S-SYS		AFT		(uid)		C-SYS	10						POS 24
162	TUNING FREQUENCY (HIGHER PART)													
163	TUNING FREQUENCY (LOWER PART)													
164	S-SYS		AFT		(uid)		C-SYS	10						POS 25
165	TUNING FREQUENCY (HIGHER PART)													
166	TUNING FREQUENCY (LOWER PART)													
167	S-SYS		AFT		(uid)		C-SYS	10						POS 26
168	TUNING FREQUENCY (HIGHER PART)													
169	TUNING FREQUENCY (LOWER PART)													
16A	S-SYS		AFT		(uid)		C-SYS	10						POS 27
16B	TUNING FREQUENCY (HIGHER PART)													
16C	TUNING FREQUENCY (LOWER PART)													
16D	S-SYS		AFT		(uid)		C-SYS	10						POS 28
16E	TUNING FREQUENCY (HIGHER PART)													
16F	TUNING FREQUENCY (LOWER PART)													
170	S-SYS		AFT		(uid)		C-SYS	10						POS 29
171	TUNING FREQUENCY (HIGHER PART)													
172	TUNING FREQUENCY (LOWER PART)													
173	S-SYS		AFT		(uid)		C-SYS	10						POS 30
174	TUNING FREQUENCY (HIGHER PART)													
175	TUNING FREQUENCY (LOWER PART)													
176	S-SYS		AFT		(uid)		C-SYS	10						POS 31
177	TUNING FREQUENCY (HIGHER PART)													
178	TUNING FREQUENCY (LOWER PART)													
179	S-SYS		AFT		(uid)		C-SYS	10						POS 32
17A	TUNING FREQUENCY (HIGHER PART)													
17B	TUNING FREQUENCY (LOWER PART)													
17C	S-SYS		AFT		(uid)		C-SYS	10						POS 33
17D	TUNING FREQUENCY (HIGHER PART)													
17E	TUNING FREQUENCY (LOWER PART)													
17F	S-SYS		AFT		(uid)		C-SYS	10						
MODEL														MODEL

ADDRESS (HEX)	DATA										MC98 DEFAULT	E ^{PHOM} RANGE	E ^{PHOM} WRITE(9)	CHASSIS CHECK DATA CHECK TYPE	CTV FINAL CHECK DATA CHECK TYPE	LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0									
180																POS 34	
181			TUNING FREQUENCY (HIGHER PART)														
182		5.5VS		AFT				C.5YS	10							POS 35	
183			TUNING FREQUENCY (LOWER PART)														
184			TUNING FREQUENCY (HIGHER PART)													POS 36	
185		5.5VS		AFT				C.5YS	10								
186			TUNING FREQUENCY (LOWER PART)													POS 37	
187		5.5VS		AFT				C.5YS	10								
188			TUNING FREQUENCY (HIGHER PART)													POS 38	
189			TUNING FREQUENCY (LOWER PART)														
18A		5.5VS		AFT				C.5YS	10							POS 39	
18B			TUNING FREQUENCY (HIGHER PART)														
18C			TUNING FREQUENCY (LOWER PART)													POS 40	
18D		5.5VS		AFT				C.5YS	10								
18E			TUNING FREQUENCY (HIGHER PART)													POS 41	
18F			TUNING FREQUENCY (LOWER PART)														
190		5.5VS		AFT				C.5YS	10							POS 42	
191			TUNING FREQUENCY (HIGHER PART)														
192			TUNING FREQUENCY (LOWER PART)													POS 43	
193		5.5VS		AFT				C.5YS	10								
194			TUNING FREQUENCY (HIGHER PART)													POS 44	
195			TUNING FREQUENCY (LOWER PART)														
196		5.5VS		AFT				C.5YS	10							POS 45	
197			TUNING FREQUENCY (HIGHER PART)														
198			TUNING FREQUENCY (LOWER PART)													POS 46	
199		5.5VS		AFT				C.5YS	10								
19A			TUNING FREQUENCY (HIGHER PART)													POS 47	
19B			TUNING FREQUENCY (LOWER PART)														
19C		5.5VS		AFT				C.5YS	10							POS 48	
19D			TUNING FREQUENCY (HIGHER PART)														
19E			TUNING FREQUENCY (LOWER PART)													POS 49	
19F		5.5VS		AFT				C.5YS	10								
1A0			TUNING FREQUENCY (HIGHER PART)													POS 50	
1A1			TUNING FREQUENCY (LOWER PART)														
1A2		5.5VS		AFT				C.5YS	10							POS 51	
1A3			TUNING FREQUENCY (HIGHER PART)														
1A4			TUNING FREQUENCY (LOWER PART)													POS 52	
1A5		5.5VS		AFT				C.5YS	10								
1A6			TUNING FREQUENCY (HIGHER PART)													POS 53	
1A7			TUNING FREQUENCY (LOWER PART)														
1A8		5.5VS		AFT				C.5YS	10							POS 54	
1A9			TUNING FREQUENCY (HIGHER PART)														
1AA			TUNING FREQUENCY (LOWER PART)													POS 49	
1AB		5.5VS		AFT				C.5YS	10								
1AC			TUNING FREQUENCY (HIGHER PART)													POS 50	
1AD			TUNING FREQUENCY (LOWER PART)														
1AE		5.5VS		AFT				C.5YS	10							POS 51	
1AF			TUNING FREQUENCY (HIGHER PART)														
1B0			TUNING FREQUENCY (LOWER PART)													POS 52	
1B1		5.5VS		AFT				C.5YS	10								
1B2			TUNING FREQUENCY (HIGHER PART)													POS 53	
1B3			TUNING FREQUENCY (LOWER PART)														
1B4		5.5VS		AFT				C.5YS	10							POS 54	
1B5			TUNING FREQUENCY (HIGHER PART)														
1B6		5.5VS		AFT				C.5YS	10							POS 55	
1B7			TUNING FREQUENCY (LOWER PART)														
1B8		5.5VS		AFT				C.5YS	10							POS 56	
1B9			TUNING FREQUENCY (HIGHER PART)														
1BA			TUNING FREQUENCY (LOWER PART)													POS 57	
1BB		5.5VS		AFT				C.5YS	10								
1BC			TUNING FREQUENCY (HIGHER PART)													POS 58	
1BD			TUNING FREQUENCY (LOWER PART)														
1BE		5.5VS		AFT				C.5YS	10							POS 59	
1BF			TUNING FREQUENCY (HIGHER PART)														
MODEL												MODEL					
LETTER NO.																LETTER NO.	

15-1

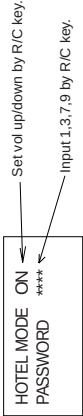
HOTEL MODE APPLICATION NOTE

The purpose of this HOTEL MODE is to enable hotel authorized person to store the tuned programs as hotel channels, current volume as maximum hotel volume, picture and sound setting. In addition, the end user will not be able to select Preset and Channel-setting functions.

How to enable/disable the "Hotel Mode" ?

Ans: a) Select BLUE BACK function (under MENU-FEATURE selection) by R/C, press the -/-(one/two digit) key and keep pressing it for five second, then you can see the hotel mode with four digits password.

b) Key in the four digits password starting with number "1", "3", "7", "9", then the hotel mode will be in ENABLE condition, you can switch on/off the hotel mode by using R/C (volume up/down) key.



#1Ch 1 is your selected channel for hotel mode.

- * We recommend:
Before set the hotel mode, it is better to choose CH 1 & set SOUND VOLUME level Up to 75% full scale.
After set hotel mode, starting channel will be always ch 1 & maximum sound level out will be set to 75% of full scale.
- * If you set hotel mode in AV, starting channel will be the last ch which you received before power off (same as normal operation)

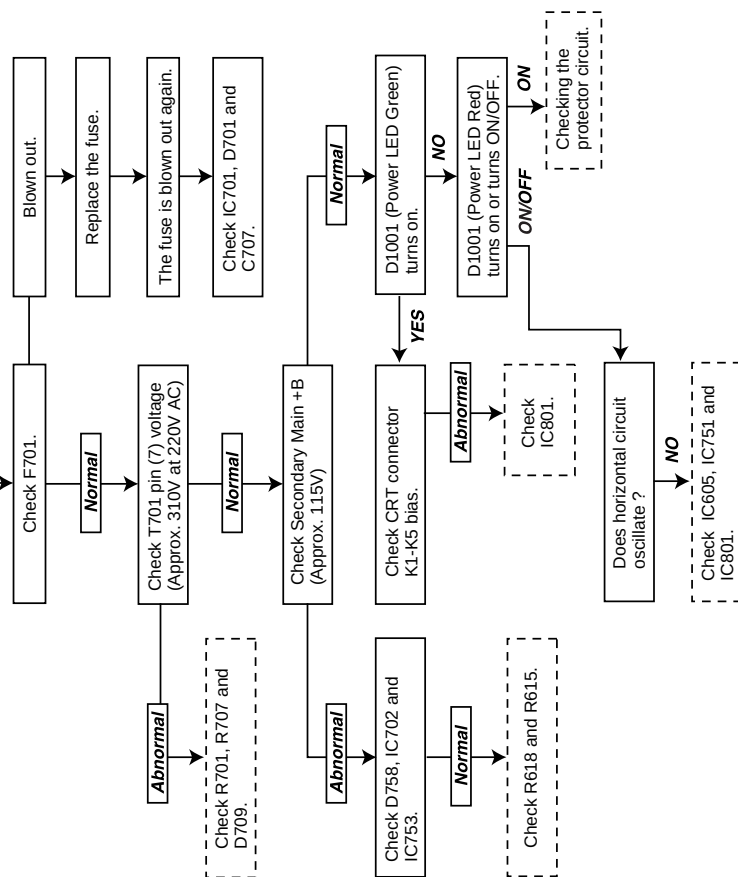
CONDITION:

When using hotel mode, the end user can ONLY control PICTURE, SOUND and FEATURE selection. But, it will return to the previous hotel mode setting condition, after power off.
The end user can't use: — CH-SETTING (OSD become violet) and Preset. The other function is allowed to be used.

ADDRESS (HEX)	DATA							MICON DEFAULT	E ² FROM RANGE	E ² FROM WRITE(OUT)	CHASSIS CHECK DATA	CHECK TYPE	CTV FINAL CHECK DATA	CHECK TYPE	LAST INITIAL SETTING DATA	REMARK			
	D7	D6	D5	D4	D3	D2	D1										D0		
240	TUNING FREQUENCY (HIGHER PART)															POS 98			
241	TUNING FREQUENCY (LOWER PART)																		
242	S-SYS															POS 99			
243	AFT							10											
244	TUNING FREQUENCY (HIGHER PART)																		
245	AFT																		
246	C-SYS							10									AV1		
247	C-SYS																		
248	C-SYS							10										AV2	
249	24A																		
24A	C-SYS							10											
24B	C-SYS																		
24C	C-SYS																		
24D	C-SYS							10										GAME	
24E	C-SYS																		
24F	C-SYS																		
250	C-SYS																		
251	C-SYS																		
252	C-SYS																		
253	C-SYS																		
254	C-SYS																		
255	C-SYS																		
256	C-SYS																		
257	C-SYS																		
258	C-SYS																		
259	C-SYS																		
25A	C-SYS																		
25B	C-SYS																		
25C	C-SYS																		
25D	C-SYS																		
25E	C-SYS																		
25F	C-SYS																		
260	C-SYS																		
261	C-SYS																		
262	C-SYS																		
263	C-SYS																		
264	C-SYS																		
265	C-SYS																		
266	C-SYS																		
267	C-SYS																		
268	C-SYS																		
269	C-SYS																		
26A	C-SYS																		
26B	C-SYS																		
26C	C-SYS																		
26D	C-SYS																		
26E	C-SYS																		
26F	C-SYS																		
270	C-SYS																		
271	C-SYS																		
272	C-SYS																		
273	C-SYS																		
274	C-SYS																		
275	C-SYS																		
276	C-SYS																		
277	C-SYS																		
278	C-SYS																		
279	C-SYS																		
27A	C-SYS																		
27B	C-SYS																		
27C	C-SYS																		
27D	C-SYS																		
27E	C-SYS																		
27F	C-SYS																		
MODEL								MODEL								LETTER NO.			
																</			

TRUBLE SHOOTING TABLE

NO RASTER

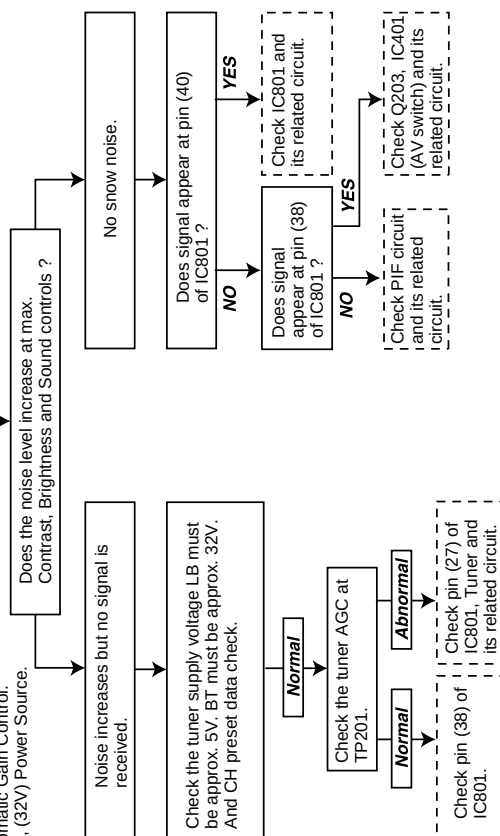


17-1

TRUBLE SHOOTING TABLE (Continued)

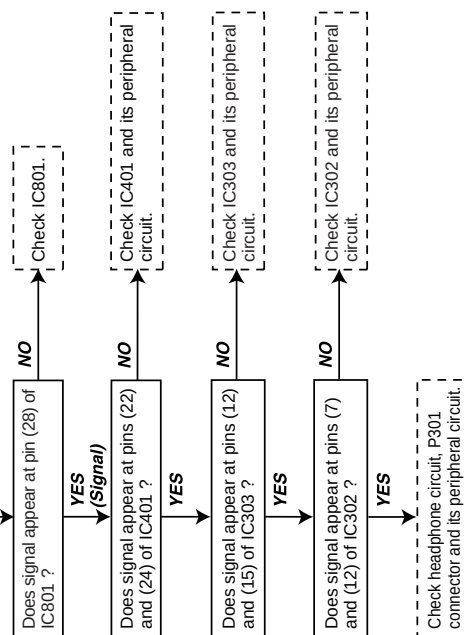
NO PICTURE, NO SOUND

- CIRCUITS TO BE CHECKED:**
- Tuner.
 - PIF.
 - Automatic Gain Control.
 - (5V), (32V) Power Source.



- CIRCUITS TO BE CHECKED:**
- Sound system pin (28) of IC801.
 - AV Switch Circuit.
 - Surround Circuit.
 - Audio Output Circuit.

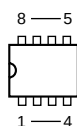
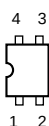
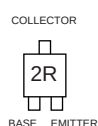
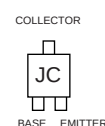
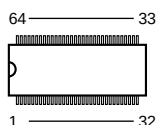
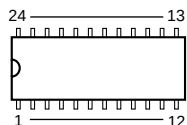
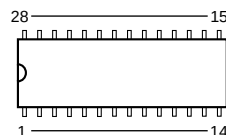
NO SOUND



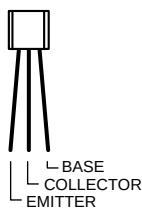
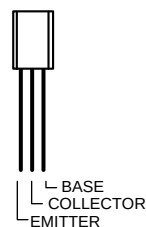
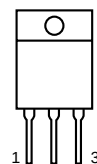
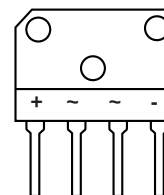
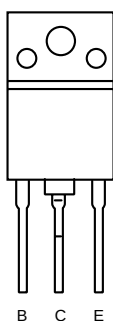
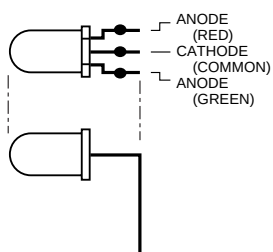
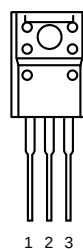
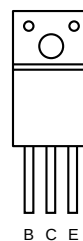
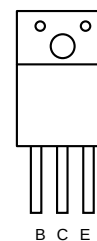
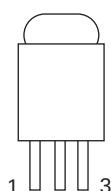
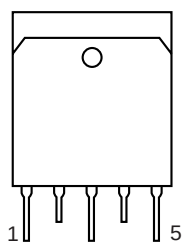
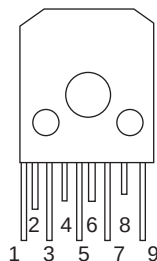
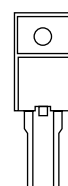
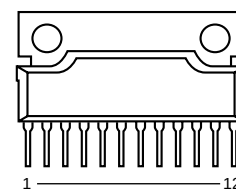
17-2

SOLID STATE DEVICE BASE DIAGRAM

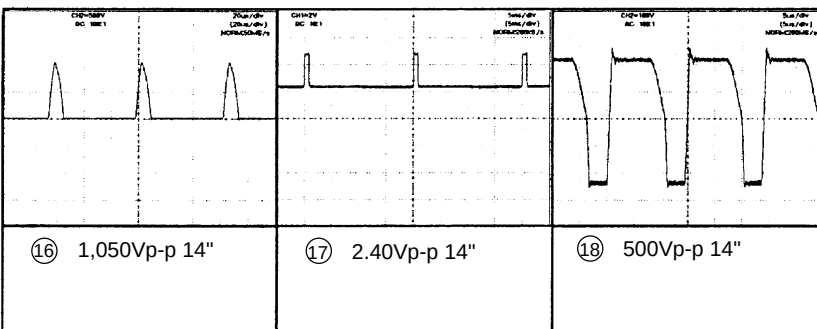
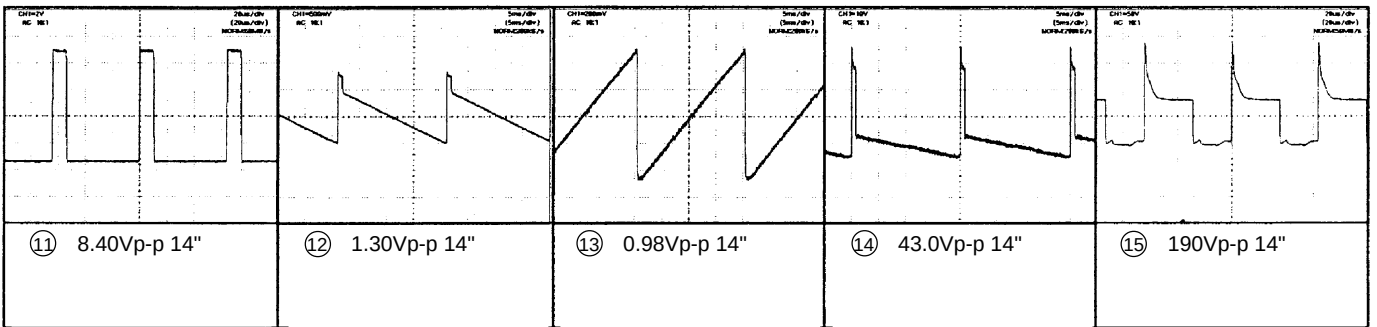
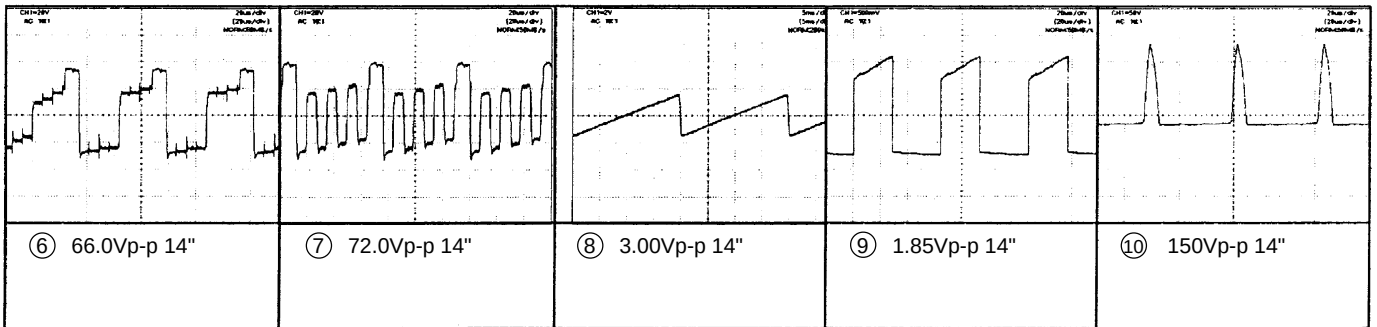
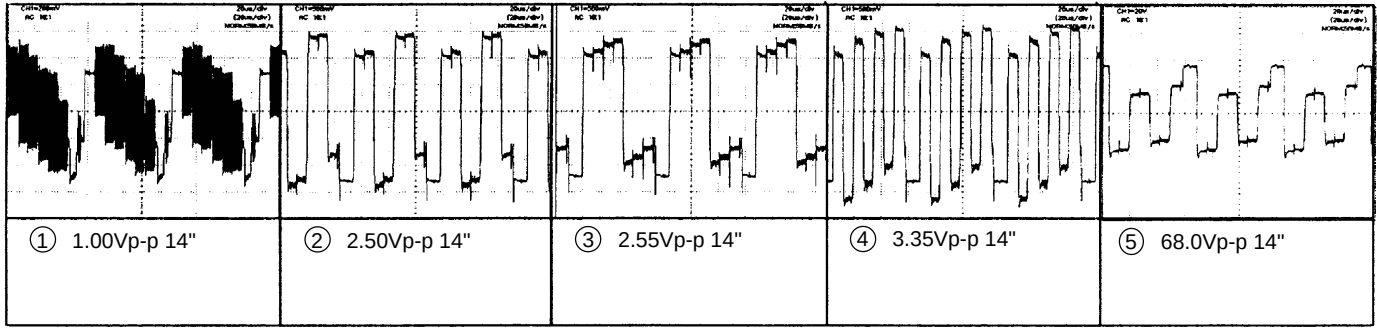
TOP VIEW

**M24C08W****FX0008GE****D601A****B709A****2SC2735****iX3410CE****AN5891K****M52797SP**

SIDE VIEW

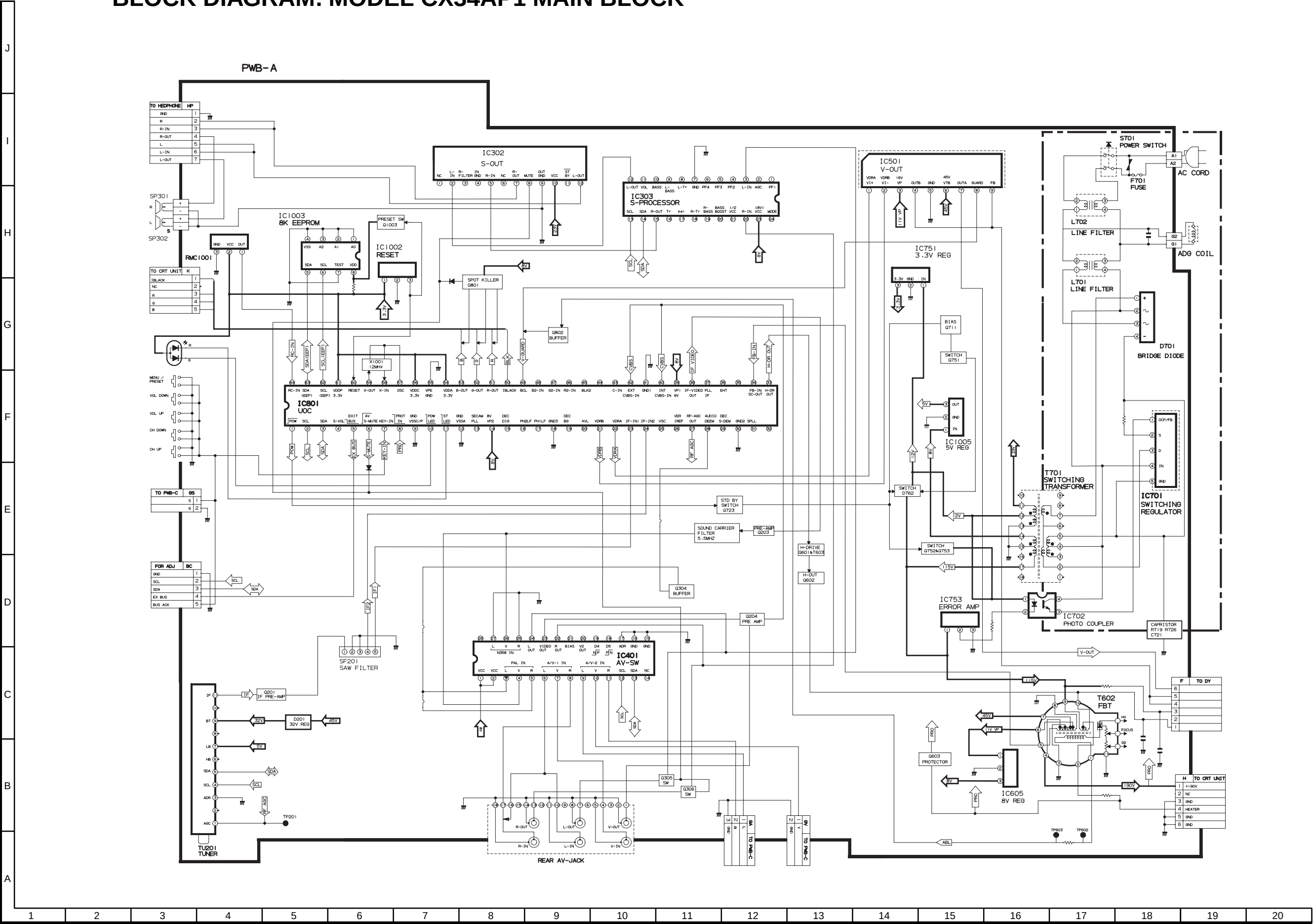
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2SC1815****2SC2482****PST573J****SE115N****DX0386CE****2SD1877****PX0423CE****KA7808
KA7805****2SC4517****TF321S****TA48M033****STRF6653****TDA8357****DX0445CE****AN5276**

WAVEFORMS



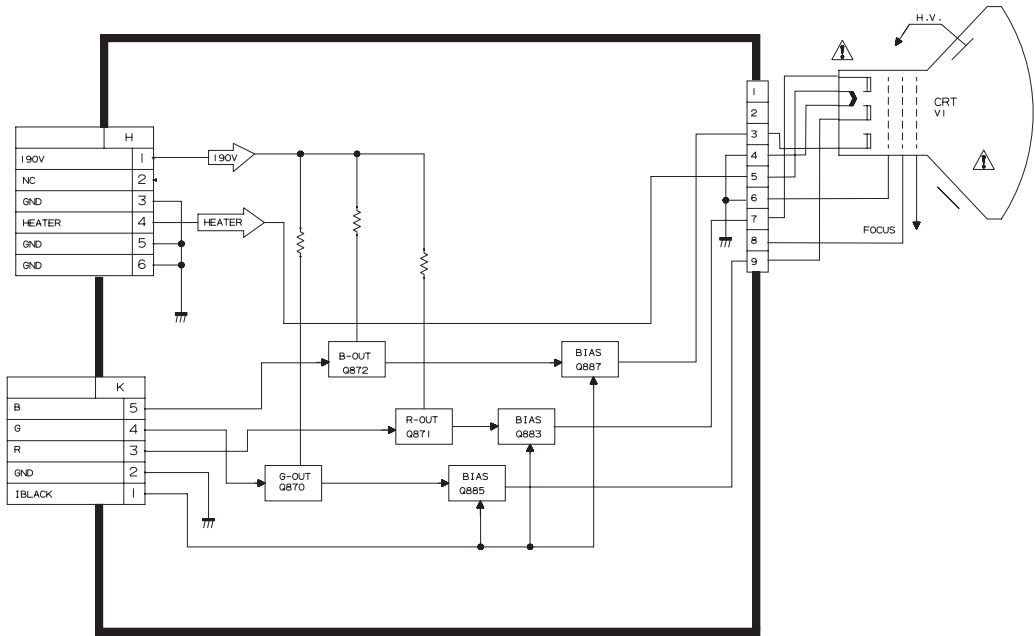


BLOCK DIAGRAM: MODEL CX34AP1 MAIN BLOCK

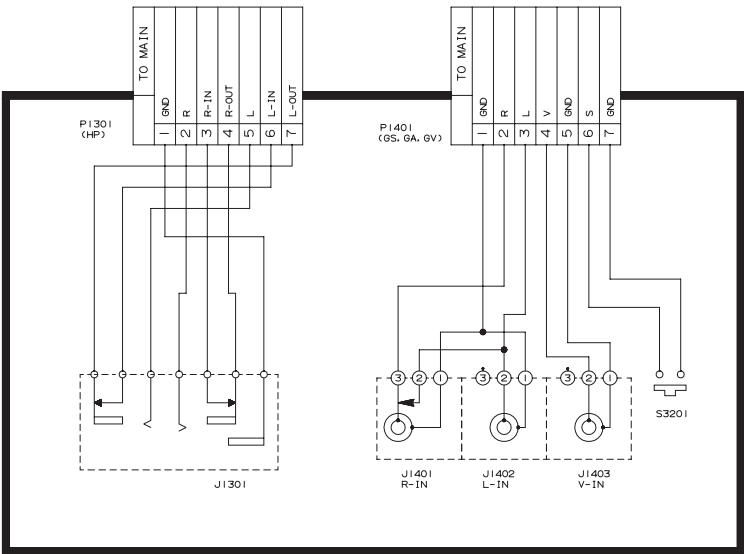


BLOCK DIAGRAM
MODEL CX34AP1 CRT BLOCK/FRONT BLOCK

CRT UNIT



FRONT UNIT



DESCRIPTION OF SCHEMATIC DIAGRAM

SAFETY NOTES:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" () ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (— - —) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.
WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

NOTES:

1. The unit of resistance "ohm" is omitted.
(K = 1000 ohms, M = Mega ohm).
2. All resistors are 1/8 watt, unless otherwise noted.
3. All capacitors are μF , unless otherwise noted. (P = $\mu\mu F$).

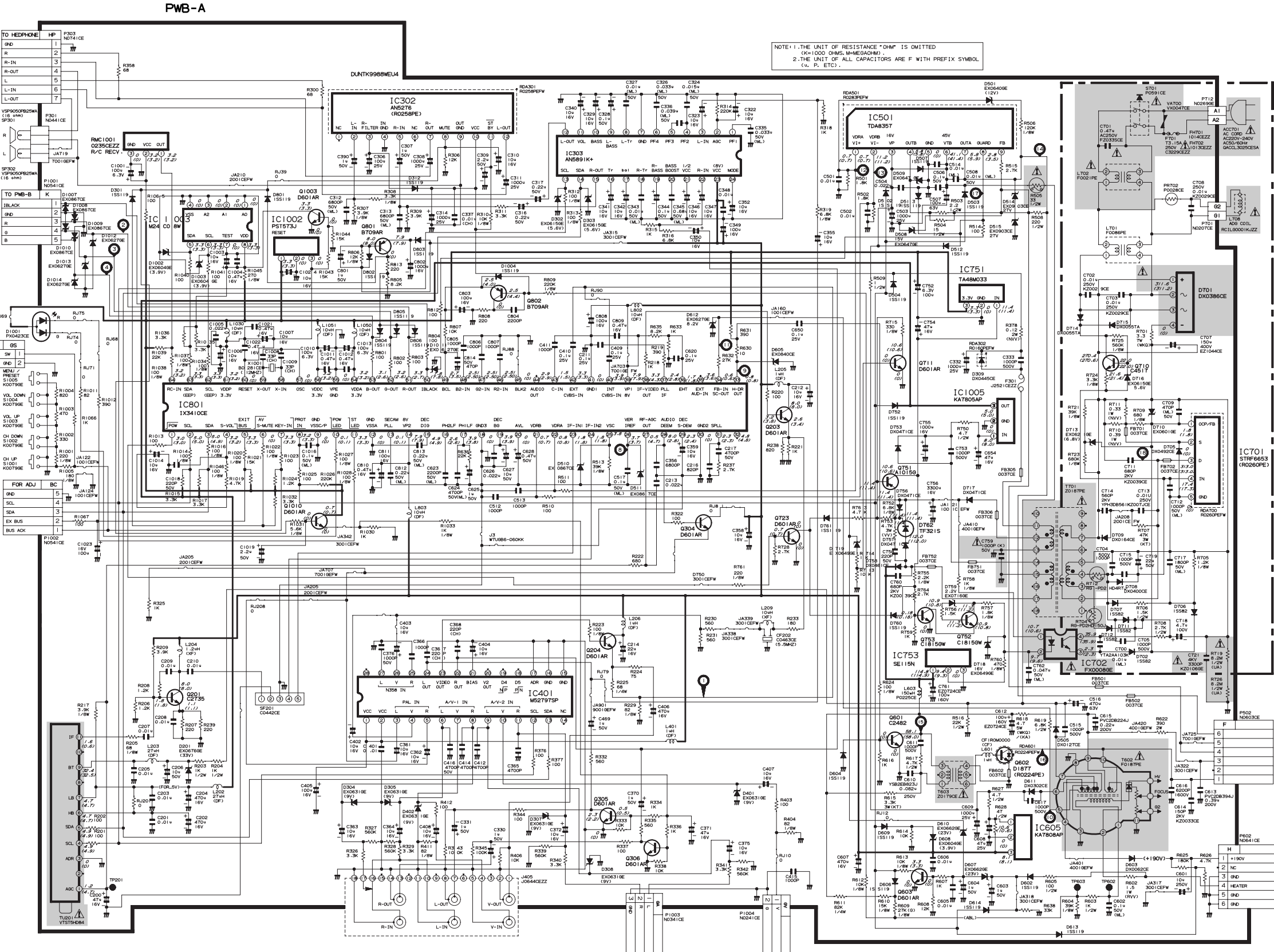
VOLTAGE MEASUREMENT CONDITIONS:

1. Voltages in parenthesis measured with no signal.
2. Voltages without parenthesis measured with 3mV B & W or Colour signal.
3. All the voltages in each point are measured with VTVM.

WAVEFORM MEASUREMENT CONDITIONS:

1. The colour bar generator signal of 1.0V peak applied at pin (24) of IC201.
2. Approximately 4V AGC bias .

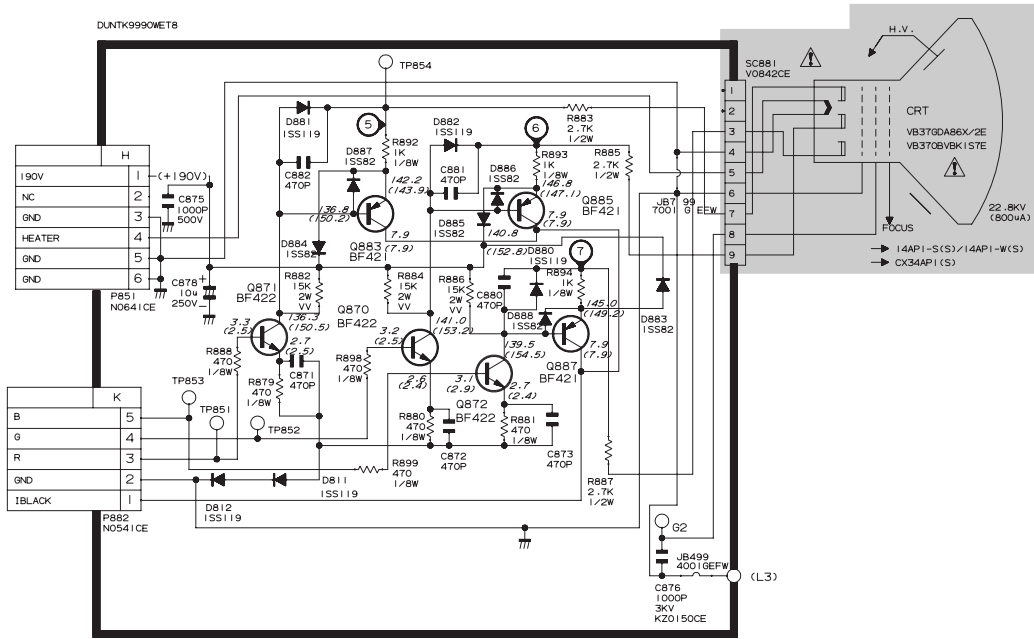
SCHEMATIC DIAGRAM: MODEL CX34AP1 MAIN Unit



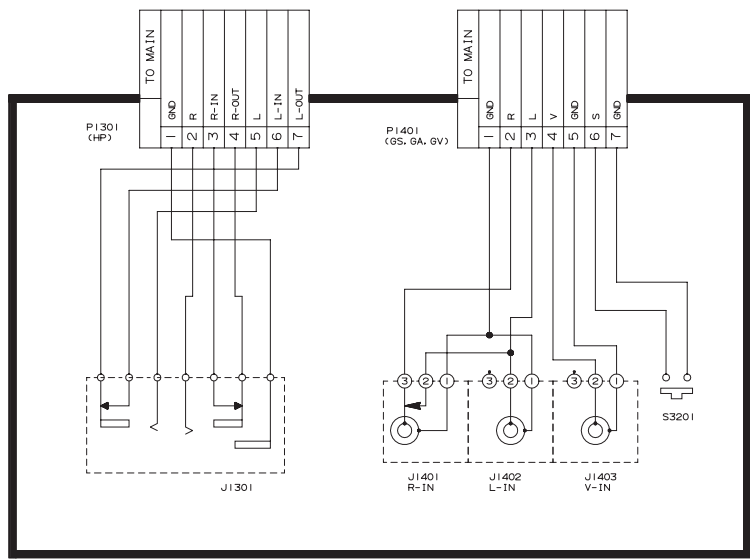
SCHEMATIC DIAGRAM:
MODEL CX34AP1 CRT UNIT/FRONT UNIT

CRT

NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGACHM).
2. ALL RESISTORS ARE 1/16 WATT UNLESS OTHERWISE NOTED.
3. UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u. p. ETC.).



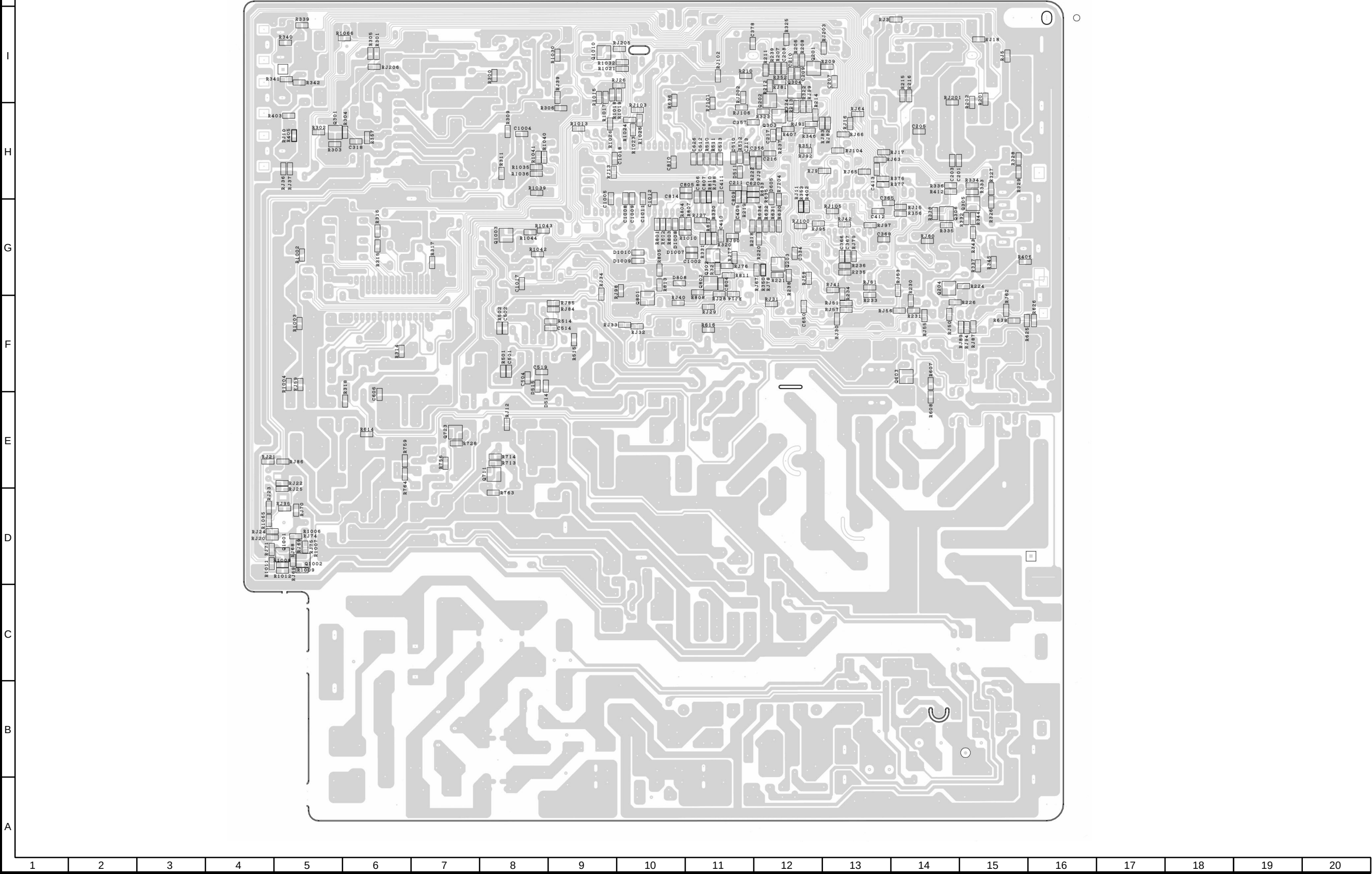
FRONT UNIT



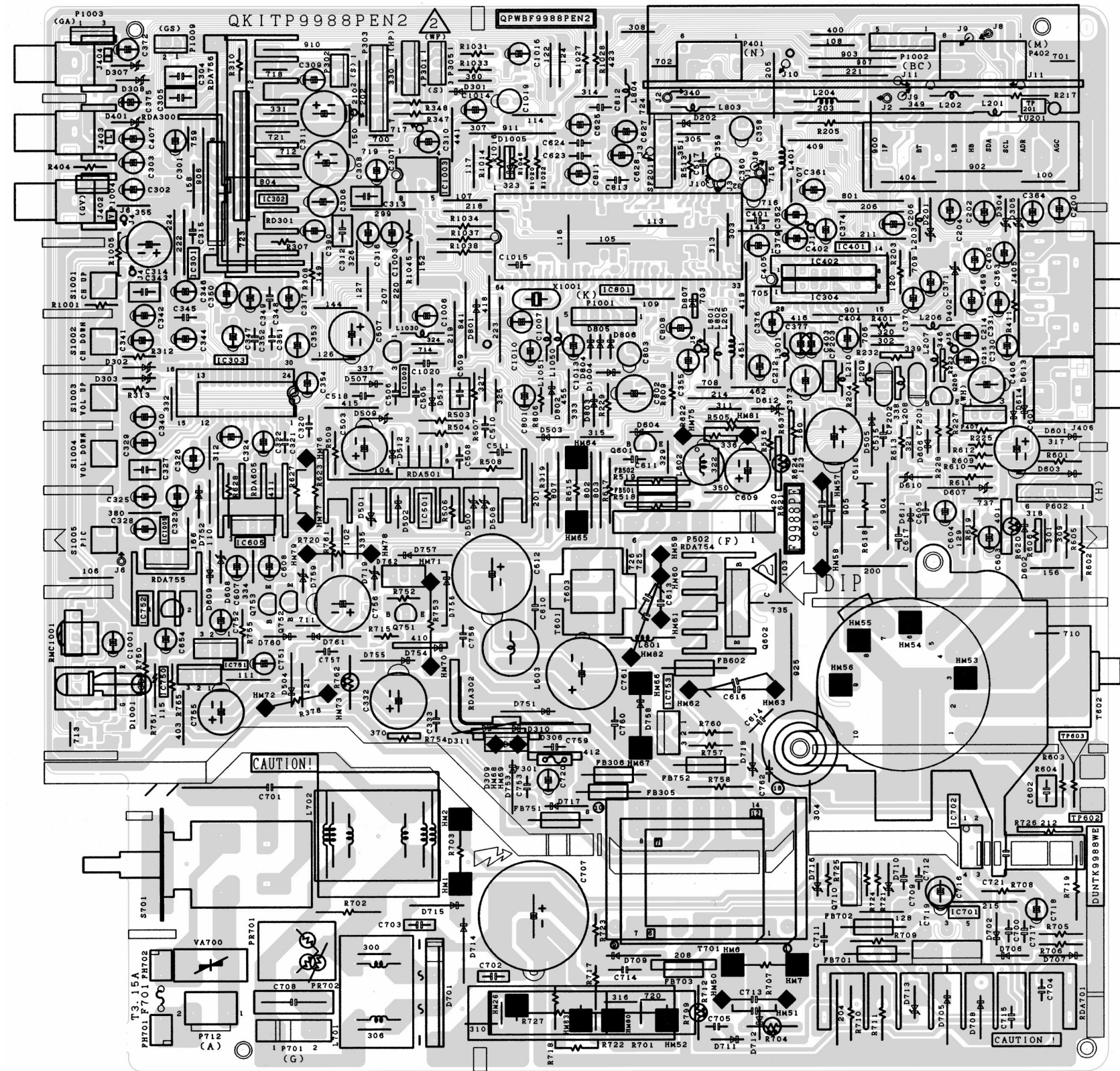
- M E M O -

[illegible]

PRINTED WIRING BOARD ASSEMBLIES
PWB-A: MAIN Unit (Wiring Side)



PWB-A: MAIN Unit (Component Side)



REPLACEMENT PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "▲" in the Replacement Parts Lists.

The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |

MARK ★ : SPARE PARTS-DELIVERY SECTION.

Ref. No.	Part No.	★	Description	Code
PICTURE TUBE				
▲ L708	VB370BVBK1S7E		Picture Tube	
	RCiLG0001KJZZ		Degaussing Coil	
	LHLDW0003PEKZ	R	Holder	AB
	LHLDW1003KJZZ		Holder	
	MSPRT0001PEFJ	R	Spring	AC

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PWB-A	DUNTK9988WEU4	-	MAIN UNIT	—
PWB-B	DUNTK9990WET8	-	CRT UNIT	—
PWB-C	DUNTKA253WET0	-	FRONT UNIT	—

DUNTK9988WEU4 PWB-A:MAIN UNIT

TUNER

NOTE: THE PARTS HERES SHOWN ARE SUPPLIED AS AN ASSEMBLY NOT INDEPENDENTLY.

▲ TU201	VTUVTST5HD84/	R	Tuner	BB
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INTEGRATED CIRCUITS

IC302	VHiAN5276/-1	R	AN5276	AR
IC303	VHiAN5891K+-1	R	AN5891K+	AQ
IC401	VHiM52797SP-1	R	M52797SP	AP
IC501	VHiTDA8357/-1	R	TDA8357	AN
IC605	VHiKA7808AP-1	R	KA7808AP	AE
IC701	VHiSTRF6653-1	R	STRF6653	AS
IC751	VHiTA48M033-1	R	TA48M033	AH
IC753	VHiSE115N/-1	R	SE115N	AF
IC801	RH-IX3410CEN4	R	IX3410CEN4	BD
IC1002	VHiPST573J/-1	R	PST573J	AE
IC1003	VHiM24C08W/-1	R	M24C08W	AH
IC1005	VHiKA7805AP-1	R	KA7805AP	AE

TRANSISTORS

Q201	VS2SC2735//1E	R	2SC2735	AC
Q203	VS2SD601AR/-1	R	2SD601AR	AC
Q204	VS2SD601AR/-1	R	2SD601AR	AC

Ref. No.	Part No.	★	Description	Code
Q304	VS2SD601AR/-1	R	2SD601AR	AC
Q305	VS2SD601AR/-1	R	2SD601AR	AC
Q306	VS2SD601AR/-1	R	2SD601AR	AC
Q601	VS2SC2482//1	R	2SC2482	AD
Q602	VS2SD1877//1E	R	2SD1877	AL
Q603	VS2SD601AR/-1	R	2SD601AR	AC
Q710	VS2SC4517//1	R	2SC4517	AG
Q711	VS2SD601AR/-1	R	2SD601AR	AC
Q723	VS2SD601AR/-1	R	2SD601AR	AC
Q751	VS2SA1015G/1E	R	2SA1015G	AC
Q752	VS2SC1815GW-1	R	2SC1815GW	AB
Q753	VS2SC1815GW-1	R	2SC1815GW	AB
Q801	VS2SB709AR/-1	R	2SB709AR	AC
Q802	VS2SB709AR/-1	R	2SB709AR	AC
Q1003	VS2SD601AR/-1	R	2SD601AR	AC
Q1010	VS2SD601AR/-1	R	2SD601AR	AC

DIODES

D201	RH-EX0676GEZZ	R	Zener Diode	AA
D301	VHD1SS119//1	R	1SS119	AB
D302	RH-EX0615GEZZ	R	Zener Diode	AA
D303	RH-EX0615GEZZ	R	Zener Diode	AA
D304	RH-EX0631GEZZ	R	Zener Diode	AA
D305	RH-EX0631GEZZ	R	Zener Diode	AA
D307	RH-EX0631GEZZ	R	Zener Diode	AA
D308	RH-EX0631GEZZ	R	Zener Diode	AA
D309	RH-DX0445CEZZ	R	DX0445CE	AL
D312	VHD1SS119//1	R	1SS119	AB
D401	RH-EX0631GEZZ	R	Zener Diode	AA
D402	RH-EX0631GEZZ	R	Zener Diode	AA
D501	RH-EX0640GEZZ	R	Zener Diode	AA
D502	VHD1SS119//1	R	1SS119	AB
D503	VHD1SS119//1	R	1SS119	AB
D504	VHD1SS119//1	R	1SS119	AB
D505	RH-DX0127CEZZ	R	DX0127CE	AC
D507	VHD1SS119//1	R	1SS119	AB
D508	RH-EX0647GEZZ	R	Zener Diode	AA
D509	RH-EX0647GEZZ	R	Zener Diode	AA
D510	RH-EX0867CEZZ	R	Zener Diode	AC
D511	RH-EX0867CEZZ	R	Zener Diode	AC
D512	VHD1SS119//1	R	1SS119	AB
D513	VHD1SS119//1	R	1SS119	AB
D514	RH-EX0903CEZZ	R	Zener Diode	AC
D515	RH-EX0903CEZZ	R	Zener Diode	AC
D602	VHD1SS119//1	R	1SS119	AB
D603	RH-DX0062CEZZ	R	DX0062CE	AD
D604	VHD1SS119//1	R	1SS119	AB
D605	RH-EX0840CEZZ	R	Zener Diode	AC
D606	VHD1SS119//1	R	1SS119	AB
D607	RH-EX0662GEZZ	R	Zener Diode	AB
D608	RH-EX0604GEZZ	R	Zener Diode	AB
D609	VHD1SS119//1	R	1SS119	AB
D610	RH-EX0662GEZZ	R	Zener Diode	AB
D611	RH-DX0302CEZZ	R	DX0302CE	AC
D612	RH-EX0627GEZZ	R	Zener Diode	AA
D613	VHD1SS119//1	R	1SS119	AB
D614	VHD1SS119//1	R	1SS119	AB
▲ D701	RH-DX0386CEZZ	R	DX0386CE	AG
D702	VHD1SS82///1A	R	1SS82	AC
D705	RH-DX0492CEZZ	R	DX0492CE	AE
D706	VHD1SS82///1A	R	1SS82	AC
D707	VHD1SS82///1A	R	1SS82	AC
D708	RH-DX0400CEZZ	R	DX0400CE	AC
D709	RH-DX0164CEZZ	R	DX0164CE	AC
D710	RH-EX0601GEZZ	R	Zener Diode	AA
D711	VHD1SS82///1A	R	1SS82	AC
D712	VHD1SS82///1A	R	1SS82	AC
D713	RH-EX0621GEZZ	R	Zener Diode	AB
D714	RH-DX0055TAZZ	R	DX0055TA	AD
D715	RH-DX0055TAZZ	R	DX0055TA	AD
D716	RH-EX0615GEZZ	R	Zener Diode	AA
D717	RH-DX0471CEZZ	R	DX0471CE	AE
D718	RH-EX0649GEZZ	R	Zener Diode	AB
D719	RH-EX0649GEZZ	R	Zener Diode	AB
D752	VHD1SS119//1	R	1SS119	AB
D753	RH-DX0471CEZZ	R	DX0471CE	AE
D756	RH-DX0471CEZZ	R	DX0471CE	AE

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
D757	RH-DX0471CEZZ	R	DX0471CE	AE	C307	VCEA0A1HW105M	R 1	50V Electrolytic	AB
D758	RH-DX0461CEZZ	R	DX0461CE	AG	C308	VCEA0A1EW108M	R 1000	25V Electrolytic	AD
D759	RH-EX0716GEZZ	R	Zener Diode	AB	C309	VCEA0A1HW225M	R 2.2	50V Electrolytic	AB
D760	VHD1SS119/-1	R	1SS119	AB	C310	VCEA0A1CW106M	R 10	16V Electrolytic	AB
D761	VHD1SS119/-1	R	1SS119	AB	C311	VCEA0A1EW108M	R 1000	25V Electrolytic	AD
D762	VHDTF321S/-1	R	TF321S	AH	C312	VCQYTA1HM682J	R 6800p	50V Mylar	AB
D801	VHD1SS119/-1	R	1SS119	AB	C313	VCQYTA1HM682J	R 6800p	50V Mylar	AB
D802	VHD1SS119/-1	R	1SS119	AB	C314	VCEA0A1EW108M	R 1000	25V Electrolytic	AD
D803	VHD1SS119/-1	R	1SS119	AB	C316	VCEA0A1HW224M	R 0.22	50V Electrolytic	AB
D804	VHD1SS119/-1	R	1SS119	AB	C317	VCEA0A1HW224M	R 0.22	50V Electrolytic	AB
D805	VHD1SS119/-1	R	1SS119	AB	C322	VCEA0A1CW106M	R 10	16V Electrolytic	AB
D806	VHD1SS119/-1	R	1SS119	AB	C323	VCEA0A1CW106M	R 10	16V Electrolytic	AB
D1001	RH-PX0423CEZZ	R	PhotoDiode	AD	C324	VCQYTA1HM153J	R 0.015	50V Mylar	AA
D1002	RH-EX0604GEZZ	R	Zener Diode	AB	C326	VCQYTA1HM333J	R 0.033	50V Mylar	AA
D1003	RH-EX0604GEZZ	R	Zener Diode	AB	C327	VCQYTA1HM103J	R 0.01	50V Mylar	AA
D1004	VHD1SS119/-1	R	1SS119	AB	C328	VCEA0A1HW104M	R 0.1	50V Electrolytic	AB
D1007	RH-EX0867CEZZ	R	Zener Diode	AC	C329	VCEA0A1CW106M	R 10	16V Electrolytic	AB
D1008	RH-EX0867CEZZ	R	Zener Diode	AC	C330	VCEA0A1HW105M	R 1	50V Electrolytic	AB
D1009	RH-EX0867CEZZ	R	Zener Diode	AC	C331	VCEA0A1HW105M	R 1	50V Electrolytic	AB
D1010	RH-EX0867CEZZ	R	Zener Diode	AC	C332	VCEA0A1EW108M	R 1000	25V Electrolytic	AD
D1011	RH-EX0627GEZZ	R	Zener Diode	AA	C333	VCKYPA2HB102K	R 1000p	500V Ceramic	AA
D1012	RH-EX0627GEZZ	R	Zener Diode	AA	C335	VCQYTA1HM333J	R 0.033	50V Mylar	AA
D1013	RH-EX0627GEZZ	R	Zener Diode	AA	C336	VCQYTA1HM393J	R 0.039	50V Mylar	AA
D1014	RH-EX0627GEZZ	R	Zener Diode	AA	C337	VCKYCY1HB103K	R 0.01	50V Ceramic	AA
⚠ IC702	RH-FX0008GEZZ	R	PC123FY8	AE	C340	VCEA0A1CW106M	R 10	16V Electrolytic	AB
⚠ VA700	RH-VX0047CEZZ	R	Varistor	AF	C341	VCEA0A1CW106M	R 10	16V Electrolytic	AB
PACKAGED CIRCUITS					C342	VCEA0A1CW106M	R 10	16V Electrolytic	AB
PR702	RMPTP0028CEZZ	R	Packaged Circuit	AG	C343	VCQYTA1HM103J	R 0.01	50V Mylar	AA
X1001	RCRSB0281CEZZ	R	Crystal, CRSB0281CE	AG	C344	VCEA0A1HW104M	R 0.1	50V Electrolytic	AB
FILTERS					C345	VCIFYA1HA684J	R 0.68	50V Mylar	AD
SF201	RFILC0442CEZZ	R	Filter, FiLC0442CE	AL	C346	VCEA0A1CW106M	R 10	16V Electrolytic	AB
CF202	RFILC0463CEZZ	R	Filter, FiLC0463CE	AD	C347	VCEA0A1CW106M	R 10	16V Electrolytic	AB
COILS					C348	VCKYPA1HF103Z	R 0.01	50V Ceramic	AA
L202	VP-DF270K0000	R	Peaking, 27μH	AB	C349	VCEA0A1CW107M	R 100	16V Electrolytic	AC
L203	VP-DF270K0000	R	Peaking, 27μH	AB	C350	VCEA0A1CW106M	R 10	16V Electrolytic	AB
L204	VP-XF1R2K0000	R	Peaking, 1.2μH	AB	C352	VCEA0A1CW106M	R 10	16V Electrolytic	AB
L205	VP-DF1R0K0000	R	Peaking, 1μH	AB	C355	VCEA0A1CW106M	R 10	16V Electrolytic	AB
L206	VP-DF1R0K0000	R	Peaking, 1μH	AB	C356	VCKYCY1HB682K	R 6800p	50V Ceramic	AA
L209	VP-XF100K0000	R	Peaking, 10μH	AB	C358	VCEA9M1CW106M	R 10	16V Electrolytic	AB
L401	VP-DF1R0K0000	R	Peaking, 1μH	AB	C359	VCEA9M1CW106M	R 10	16V Electrolytic	AB
L601	VP-CF1R0M0000	R	Peaking, 1μH	AB	C361	VCE9GA1CW106M	R 10	16V Electrolytic	AB
L603	RCiLP0225CEZZ	R	Coil, CiLP0225CE	AF	C362	VCEA0A1CW106M	R 10	16V Electrolytic	AB
L701	RCiLF0086PEZZ	R	Coil, CiLF0086PE	AH	C363	VCEA0A1CW106M	R 10	16V Electrolytic	AB
⚠ L702	RCiLF0021PEZZ	R	Coil, CiLF0021PE	AK	C364	VCEA0A1CW106M	R 10	16V Electrolytic	AB
L802	VP-DF100K0000	R	Peaking, 10μH	AB	C365	VCKYCY1HB472K	R 4700p	50V Ceramic	AA
L803	VP-DF100K0000	R	Peaking, 10μH	AB	C366	VCKYCY1HB102K	R 1000p	50V Ceramic	AA
L1030	VP-DF100K0000	R	Peaking, 10μH	AB	C367	VCCCCY1HH221J	R 220p	50V Ceramic	AA
L1050	VP-DF100K0000	R	Peaking, 10μH	AB	C368	VCCCCY1HH221J	R 220p	50V Ceramic	AA
L1051	VP-DF100K0000	R	Peaking, 10μH	AB	C370	VCEA0A1HW105M	R 1	50V Electrolytic	AB
TRANSFORMERS					C371	VCEA0A1CW476M	R 47	16V Electrolytic	AB
⚠ T602	RTRNF0187PEZZ	R	H-Volt Transformer	AY	C372	VCEA0A1CW106M	R 10	16V Electrolytic	AB
⚠ T603	RTRNZ0179CEZZ	R	Transformer	AE	C375	VCEA0A1CW106M	R 10	16V Electrolytic	AB
⚠ T701	RTRNZ0187PEZZ	R	Transformer	AR	C376	VCKYPA1HB102K	R 1000p	50V Ceramic	AA
CAPACITORS					C390	VCEA0A1HW105M	R 1	50V Electrolytic	AB
C200	VCEA0A1CW476M	R 47	16V Electrolytic	AB	C401	VCKYPA1HF103Z	R 0.01	50V Ceramic	AA
C201	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA	C402	VCEA0A1CW106M	R 10	16V Electrolytic	AB
C202	VCEA0A1CW477M	R 470	16V Electrolytic	AC	C403	VCEA0A1CW106M	R 10	16V Electrolytic	AB
C203	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA	C404	VCEA0A1CW106M	R 10	16V Electrolytic	AB
C204	VCEA0A1CW477M	R 470	16V Electrolytic	AC	C405	VCEA0A1CW107M	R 100	16V Electrolytic	AC
C205	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA	C406	VCEA0A1CW477M	R 470	16V Electrolytic	AC
C206	VCEA0A1HW106M	R 10	50V Electrolytic	AB	C407	VCEA0A1CW106M	R 10	16V Electrolytic	AB
C207	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA	C408	VCEA0A1CW106M	R 10	16V Electrolytic	AB
C208	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA	C409	VCKYCY1EF104Z	R 0.1	25V Ceramic	AA
C209	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA	C410	VCKYCY1EF104Z	R 0.1	25V Ceramic	AA
C210	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA	C411	VCKYCY1HB102K	R 1000p	50V Ceramic	AA
C211	VCKYCY1EF104Z	R 0.1	25V Ceramic	AA	C412	VCKYCY1HB472K	R 4700p	50V Ceramic	AA
C212	VCEA0A1CW106M	R 10	16V Electrolytic	AB	C414	VCKYCY1HB472K	R 4700p	50V Ceramic	AA
C213	VCKYCY1HF223Z	R 0.022	50V Ceramic	AB	C415	VCKYCY1HB102K	R 1000p	50V Ceramic	AA
C214	VCEA0A1CW226M	R 22	16V Electrolytic	AB	C416	VCKYPA1HB472K	R 4700p	50V Ceramic	AA
C216	VCKYCY1HB821K	R 820p	50V Ceramic	AA	C469	VCEA0A1HW105M	R 1	50V Electrolytic	AB
C217	VCKYCY1HB472K	R 4700p	50V Ceramic	AA	C501	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA
C306	VCEA0A1EW107M	R 100	25V Electrolytic	AC	C502	VCKYCY1HF103Z	R 0.01	50V Ceramic	AA
					C503	VCEA0A1EW108M	R 1000	25V Electrolytic	AD
					C504	VCKYCY1HF223Z	R 0.022	50V Ceramic	AB
					C506	VCQYTA1HM104J	R 0.1	50V Mylar	AA
					C507	VCEA0A1JW107M	R 100	63V Electrolytic	AC
					C508	VCQYTA1HM103J	R 0.01	50V Mylar	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C512	VCKYCY1HB102K	R	1000p 50V Ceramic	AA	C813	VCFYFA1HA224J	R	0.22 50V Mylar	AB
C513	VCKYCY1HB102K	R	1000p 50V Ceramic	AA	C814	VCKYCY1HB471K	R	470p 50V Ceramic	AA
C514	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA	C1001	VCEA0A0JW107M	R	100 6.3V Electrolytic	AB
C515	VCKYPA2HB102K	R	1000p 500V Ceramic	AA	C1003	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C516	VCEA0A1JW477M	R	470 63V Electrolytic	AE	C1004	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB
C517	VCQYTA1HM104J	R	0.1 50V Mylar	AA	C1005	VCKYCY1HF223Z	R	0.022 50V Ceramic	AB
C601	VCEAGA2EW106M	R	10 250V Electrolytic	AC	C1006	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C602	VCQYTA1HM104J	R	0.1 50V Mylar	AA	C1007	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C603	VCEA0A1HW105M	R	1 50V Electrolytic	AB	C1008	VCCCCY1HH330J	R	33p 50V Ceramic	AA
C604	VCEA0A1HW105M	R	1 50V Electrolytic	AB	C1009	VCCCCY1HH330J	R	33p 50V Ceramic	AA
C605	VCKYPA1HF103Z	R	0.01 50V Ceramic	AA	C1010	VCEA0A0JW107M	R	100 6.3V Electrolytic	AB
C606	VCKYCY1HF103Z	R	0.01 50V Ceramic	AA	C1011	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB
C607	VCEA0A1CW477M	R	470 16V Electrolytic	AC	C1012	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB
C608	VCEA0A1EW476M	R	47 25V Electrolytic	AB	C1013	VCEA0A0JW107M	R	100 6.3V Electrolytic	AB
C609	VCEA0A1EW108M	R	1000 25V Electrolytic	AD	C1014	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C610	VCFYSB2EB823J	R	0.082 250V Metallized Polypro Film	AD	C1016	VCQYTA1HM104J	R	0.1 50V Mylar	AA
C611	VCKYPA2HB102K	R	1000p 500V Ceramic	AA	C1018	VCKYCY1HB221K	R	220p 50V Ceramic	AA
C612	RC-EZ0724CEZZ	R	100 160V Electrolytic	AG	C1019	VCEA9M1HW225M	R	2.2 50V Electrolytic	AB
C613	VCFPVC2DB394J	R	0.39 200V Metallized Polypro Film	AE	C1021	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB
C614	RC-KZ0033CEZZ	R	150p 2kV Ceramic	AB	C1022	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB
C615	VCFPVC2DB224J	R	0.22 200V Metallized Polypro Film	AE	C1023	VCEA0A1CW107M	R	100 16V Electrolytic	AC
C616	VCFPPD3CA622H	R	6200p 1600V Metallized Polypro Film	AE	C1024	VCEA0A1CW106M	R	10 16V Electrolytic	AB
C617	VCKYPA2HB102K	R	1000p 500V Ceramic	AA	RESISTORS				
C620	VCKYCY1EF104Z	R	0.1 25V Ceramic	AA	C334	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C623	VCQYTA1HM222J	R	2200p 50V Mylar	AA	RJ2	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C624	VCQYTA1HM472J	R	4700p 50V Mylar	AB	RJ9	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C625	VCEA0A1HW105M	R	1 50V Electrolytic	AB	RJ10	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C626	VCKYCY1HF223Z	R	0.022 50V Ceramic	AB	RJ12	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C627	VCEA0A1HW106M	R	10 50V Electrolytic	AB	RJ13	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C628	VCEA0A1HW474M	R	0.47 50V Electrolytic	AB	RJ15	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C650	VCKYCY1EF104Z	R	0.1 25V Ceramic	AA	RJ16	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C654	VCEA0A1CW476M	R	47 16V Electrolytic	AB	RJ21	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C700	VCQYTA2AA103K	R	0.01 100V Mylar	AC	RJ25	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
△ C701	RC-FZ033SCEZZ	R	0.47 AC250V Metallized Polypro Film	AF	RJ26	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C702	RC-KZ0029CEZZ	R	0.01 250V Ceramic	AC	RJ27	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C703	RC-KZ0029CEZZ	R	0.01 250V Ceramic	AC	RJ30	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C704	VCKYPA2HB102K	R	1000p 500V Ceramic	AA	RJ31	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C705	VCKYPA2HB102K	R	1000p 500V Ceramic	AA	RJ32	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C707	RC-EZ1044CEZZ	R	150 400V Electrolytic	AM	RJ33	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C708	RC-KZ0029CEZZ	R	0.01 250V Ceramic	AC	RJ34	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C709	VCQYTA1HM471J	R	470p 50V Mylar	AB	RJ39	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C711	RC-KZ0039CEZZ	R	680p 2kV Ceramic	AB	RJ41	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C712	VCQYTA1HM102J	R	1000p 50V Mylar	AA	RJ43	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C713	RC-KZ007JCEZZ	R	0.01 250V Ceramic	AC	RJ51	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C714	VCKYPH3DB561K	R	560p 2000V Ceramic	AC	RJ53	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C715	VCKYPA2HB102K	R	1000p 500V Ceramic	AA	RJ56	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C717	VCQYTA1HM182J	R	1800p 50V Mylar	AA	RJ61	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C718	VCEAGA2AW475M	R	4.7 100V Electrolytic	AB	RJ64	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C719	VCEA0A1HW226M	R	22 50V Electrolytic	AB	RJ66	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
△ C721	RC-KZ0106GEZZ	R	3300p 4kV Ceramic	AG	RJ67	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C752	VCEA0A0JW107M	R	100 6.3V Electrolytic	AB	RJ68	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C753	VCKYPA2HB102K	R	1000p 500V Ceramic	AA	RJ69	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C754	VCEA0A1CW476M	R	47 16V Electrolytic	AB	RJ71	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C755	VCEA0A1CW108M	R	1000 16V Electrolytic	AD	RJ74	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C756	VCEA0A1CW338M	R	3300 16V Electrolytic	AE	RJ75	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C758	VCKYPA1HB221K	R	220p 50V Ceramic	AA	RJ79	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
△ C759	VCKYPA1HB102K	R	1000p 50V Ceramic	AA	RJ80	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C760	RC-KZ0039CEZZ	R	680p 2kV Ceramic	AB	RJ81	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C761	RC-EZ0724CEZZ	R	100 160V Electrolytic	AG	RJ82	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C762	VCQYTA1HM473J	R	0.047 50V Mylar	AA	RJ84	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C801	VCEA0A1HW105M	R	1 50V Electrolytic	AB	RJ85	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C802	VCEA0A1CW108M	R	1000 16V Electrolytic	AD	RJ87	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C803	VCEA9M1CW107M	R	100 16V Electrolytic	AB	RJ88	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C804	VCKYCY1HB222K	R	2200p 50V Ceramic	AA	RJ90	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C805	VCKYCY1HB102K	R	1000p 50V Ceramic	AA	RJ94	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C806	VCKYCY1HB102K	R	1000p 50V Ceramic	AA	RJ96	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C807	VCKYCY1HB102K	R	1000p 50V Ceramic	AA	RJ103	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C808	VCEA0A1CW107M	R	100 16V Electrolytic	AC	RJ107	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C809	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB	RJ201	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C810	VCKYCY1CF474Z	R	0.47 16V Ceramic	AB	RJ202	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C811	VCEA0A1CW107M	R	100 16V Electrolytic	AC	RJ205	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
C812	VCFYFA1HA224J	R	0.22 50V Mylar	AB	RJ208	VRS-CY1JF000J	R	0 1/16W Metal Oxide	AA
					R201	VRS-CY1JF101J	R	100 1/16W Metal Oxide	AA
					R202	VRS-CY1JF101J	R	100 1/16W Metal Oxide	AA
					R203	VRD-RM2HD102J	R	1k 1/2W Carbon	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R204	VRD-RM2HD102J	R 1k	1/2W Carbon	AA	R515	VRS-CY1JF272J	R 2.7k	1/16W Metal Oxide	AA
R205	VRD-RA2BE680J	R 68	1/8W Carbon	AA	R516	VRD-RM2HD223J	R 22k	1/2W Carbon	AA
R206	VRS-CY1JF122J	R 1.2k	1/16W Metal Oxide	AA	R602	VRN-VV3AB1R5J	R 1.5	1W Metal Film	AA
R207	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA	R603	VRD-RM2HD102J	R 1k	1/2W Carbon	AA
R208	VRS-CY1JF122J	R 1.2k	1/16W Metal Oxide	AA	R604	VRD-RA2BE393J	R 39k	1/8W Carbon	AA
R209	VRS-CY1JF392J	R 3.9k	1/16W Metal Oxide	AA	R605	VRD-RM2HD101J	R 100	1/2W Carbon	AA
R217	VRD-RA2BE392J	R 3.9k	1/8W Carbon	AA	R607	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R218	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA	R608	VRS-CY1JF123J	R 12k	1/16W Metal Oxide	AA
R219	VRS-CY1JF391J	R 390	1/16W Metal Oxide	AA	R609	VRD-RA2BE273G	R 27k	1/8W Carbon	AA
R220	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R610	VRD-RA2BE153J	R 15k	1/8W Carbon	AA
R221	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA	R611	VRD-RA2EE823G	R 82k	1/4W Carbon	AA
R222	VRS-CY1JF681J	R 680	1/16W Metal Oxide	AA	R612	VRD-RA2BE103J	R 10k	1/8W Carbon	AA
R223	VRD-RA2BE101J	R 100	1/8W Carbon	AB	R613	VRD-RA2BE103J	R 10k	1/8W Carbon	AA
R224	VRS-CY1JF750J	R 75	1/16W Metal Oxide	AA	R614	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R225	VRD-RA2EE680J	R 68	1/4W Carbon	AA	R615	VRS-KT3LB332J	R 3.3k	3W Metal Oxide	AC
R229	VRD-RA2BE820J	R 82	1/8W Carbon	AA	R616	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R230	VRS-CY1JF561J	R 560	1/16W Metal Oxide	AA	R617	VRD-RM2HD472J	R 4.7k	1/2W Carbon	AA
R231	VRS-CY1JF561J	R 560	1/16W Metal Oxide	AA	R618	VRS-KA3HG4R7K	R 4.7	5W Metal Oxide	AD
R233	VRS-CY1JF181J	R 180	1/16W Metal Oxide	AA	R619	VRD-RM2HD682J	R 6.8k	1/2W Carbon	AA
R237	VRS-CY1JF272J	R 2.7k	1/16W Metal Oxide	AA	R622	VRS-VV3DB391J	R 390	2W Metal Oxide	AA
R238	VRS-CY1JF821J	R 820	1/16W Metal Oxide	AA	R624	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R239	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA	R625	VRS-CY1JF184J	R 180k	1/16W Metal Oxide	AA
R300	VRS-CY1JF680J	R 68	1/16W Metal Oxide	AA	R626	VRS-CY1JF472J	R 4.7k	1/16W Metal Oxide	AA
R306	VRS-CY1JF123J	R 12k	1/16W Metal Oxide	AA	R627	VRD-RM2HD4R7J	R 4.7	1/2W Carbon	AA
R307	VRD-RA2BE392J	R 3.9k	1/8W Carbon	AA	R628	VRD-RM2HD470J	R 47	1/2W Carbon	AA
R308	VRD-RA2BE332J	R 3.3k	1/8W Carbon	AA	R630	VRS-CY1JF100J	R 10	1/16W Metal Oxide	AA
R309	VRS-CY1JF392J	R 3.9k	1/16W Metal Oxide	AA	R631	VRS-CY1JF391J	R 390	1/16W Metal Oxide	AA
R310	VRD-RA2BE103J	R 10k	1/8W Carbon	AA	R632	VRS-CY1JF273J	R 27k	1/16W Metal Oxide	AA
R311	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA	R633	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R312	VRD-RA2BE101J	R 100	1/8W Carbon	AB	R635	VRS-CY1JF822J	R 8.2k	1/16W Metal Oxide	AA
R313	VRD-RA2BE101J	R 100	1/8W Carbon	AB	R636	VRS-CY1JF223J	R 22k	1/16W Metal Oxide	AA
R314	VRS-CY1JF224J	R 220k	1/16W Metal Oxide	AA	R638	VRS-CY1JF333J	R 33k	1/16W Metal Oxide	AA
R315	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA	R701	VRW-KQ3NC3R3K	R 3.3	7W Cement	AE
R316	VRS-CY1JF682J	R 6.8k	1/16W Metal Oxide	AA	△ R704	VRG-PD2HD150J	R 15	1/2W Fuse Resistor	AC
R318	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA	R705	VRD-RA2BE122J	R 1.2k	1/8W Carbon	AA
R319	VRD-RA2BE682J	R 6.8k	1/8W Carbon	AA	R706	VRD-RM2HD152J	R 1.5k	1/2W Carbon	AA
R322	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R707	VRS-KT3LB473J	R 47k	3W Metal Oxide	AE
R325	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA	R708	VRD-RM2HD272J	R 2.7k	1/2W Carbon	AA
R326	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA	R709	VRD-RA2BE681J	R 680	1/8W Carbon	AA
R327	VRS-CY1JF564J	R 560k	1/16W Metal Oxide	AA	R710	VRN-VV3ABR39J	R 0.39	1W Metal Film	AA
R328	VRS-CY1JF564J	R 560k	1/16W Metal Oxide	AA	R711	VRN-VV3ABR33J	R 0.33	1W Metal Film	AA
R329	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA	△ R712	VRG-PD2HD4R7J	R 4.7	1/2W Fuse Resistor	AC
R332	VRS-CY1JF561J	R 560	1/16W Metal Oxide	AA	R713	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R333	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA	R714	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R334	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA	R715	VRD-RA2BE331J	R 330	1/8W Carbon	AA
R335	VRS-CY1JF561J	R 560	1/16W Metal Oxide	AA	△ R719	VRC-UA2HG825K	R 8.2M	1/2W Solid	AA
R336	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA	R721	VRD-RA2BE393J	R 39k	1/8W Carbon	AA
R337	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R723	VRD-RA2BE684J	R 680k	1/8W Carbon	AA
R338	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA	R724	VRD-RA2BE332J	R 3.3k	1/8W Carbon	AA
R339	VRS-CY1JF564J	R 560k	1/16W Metal Oxide	AA	R725	VRD-RA2BE564J	R 560k	1/8W Carbon	AA
R340	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA	△ R726	VRC-UA2HG825K	R 8.2M	1/2W Solid	AA
R341	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA	R728	VRS-CY1JF272J	R 2.7k	1/16W Metal Oxide	AA
R342	VRS-CY1JF564J	R 560k	1/16W Metal Oxide	AA	R750	VRD-RM2HD4R7J	R 4.7	1/2W Carbon	AA
R343	VRS-CY1JF104J	R 100k	1/16W Metal Oxide	AA	R752	VRD-RA2BE682J	R 6.8k	1/8W Carbon	AA
R344	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R753	VRS-VV3LB472J	R 4.7k	3W Metal Oxide	AB
R345	VRS-CY1JF104J	R 100k	1/16W Metal Oxide	AA	R755	VRD-RA2BE222J	R 2.2k	1/8W Carbon	AA
R358	VRS-CY1JF680J	R 68	1/16W Metal Oxide	AA	R756	VRS-CY1JF152J	R 1.5k	1/16W Metal Oxide	AA
R376	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R757	VRD-RA2BE182J	R 1.8k	1/8W Carbon	AA
R377	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R758	VRD-RA2BE102J	R 1k	1/8W Carbon	AA
R378	VRN-VV3DBR12J	R 0.12	2W Metal Film	AB	R759	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R403	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R760	VRD-RA2BE471J	R 470	1/8W Carbon	AA
R404	VRD-RA2BE820J	R 82	1/8W Carbon	AA	R761	VRD-RA2BE221J	R 220	1/8W Carbon	AA
R406	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA	R763	VRS-CY1JF472J	R 4.7k	1/16W Metal Oxide	AA
R411	VRD-RA2BE820J	R 82	1/8W Carbon	AA	R764	VRS-CY1JF272J	R 2.7k	1/16W Metal Oxide	AA
R412	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R801	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R501	VRS-CY1JF182J	R 1.8k	1/16W Metal Oxide	AA	R802	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R502	VRS-CY1JF182J	R 1.8k	1/16W Metal Oxide	AA	R803	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R503	VRD-RM2HD2R2J	R 2.2	1/2W Carbon	AA	R804	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R504	VRD-RM2HD150J	R 15	1/2W Carbon	AA	R805	VRS-CY1JF822J	R 8.2k	1/16W Metal Oxide	AA
R505	VRG-PD2HD330J	R 33	1/2W Fuse Resistor	AC	R806	VRD-RA2BE123J	R 12k	1/8W Carbon	AA
R506	VRD-RA2BE124J	R 120k	1/8W Carbon	AA	R807	VRS-CY1JF103J	R 10k	1/16W Metal Oxide	AA
R508	VRD-RM2HD221J	R 220	1/2W Carbon	AA	R808	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R509	VRD-RM2HD1R0J	R 1	1/2W Carbon	AA	R809	VRD-RA2BE224J	R 220k	1/8W Carbon	AA
R510	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R812	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R511	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R813	VRS-CY1JF221J	R 220	1/16W Metal Oxide	AA
R513	VRD-RA2BE393J	R 39k	1/8W Carbon	AA	R1001	VRD-RA2BE221J	R 220	1/8W Carbon	AA
R514	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA	R1002	VRS-CY1JF331J	R 330	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R1003	VRS-CY1JF471J	R 470	1/16W Metal Oxide	AA
R1004	VRS-CY1JF821J	R 820	1/16W Metal Oxide	AA
R1005	VRD-RA2BE181J	R 180	1/8W Carbon	AA
R1011	VRS-CY1JF820J	R 82	1/16W Metal Oxide	AA
R1012	VRS-CY1JF391J	R 390	1/16W Metal Oxide	AA
R1013	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R1014	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1015	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA
R1016	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1017	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA
R1019	VRS-CY1JF472J	R 4.7k	1/16W Metal Oxide	AA
R1020	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1021	VRS-CY1JF153J	R 15k	1/16W Metal Oxide	AA
R1022	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1023	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R1024	VRS-CY1JF122J	R 1.2k	1/16W Metal Oxide	AA
R1025	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R1026	VRS-CY1JF224J	R 220k	1/16W Metal Oxide	AA
R1027	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1028	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1030	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R1031	VRD-RA2BE562J	R 5.6k	1/8W Carbon	AA
R1032	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA
R1033	VRD-RA2BE102J	R 1k	1/8W Carbon	AA
R1034	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1035	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA
R1036	VRS-CY1JF332J	R 3.3k	1/16W Metal Oxide	AA
R1037	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1038	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1039	VRS-CY1JF223J	R 22k	1/16W Metal Oxide	AA
R1040	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R1041	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R1043	VRS-CY1JF153J	R 15k	1/16W Metal Oxide	AA
R1044	VRS-CY1JF153J	R 15k	1/16W Metal Oxide	AA
R1045	VRD-RA2BE271J	R 270	1/8W Carbon	AA
R1046	VRD-RA2BE101J	R 100	1/8W Carbon	AB
R1065	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA
R1066	VRS-CY1JF102J	R 1k	1/16W Metal Oxide	AA
R1067	VRS-CY1JF101J	R 100	1/16W Metal Oxide	AA

BALUNES

FB305	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB306	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB501	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB502	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB602	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB701	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB702	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB751	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB
FB752	RBLN-0037CEZZ	R Balun, BLN-0037CE	AB

SWITCHES

△ S701	QSW-P0591CEZZ	R Switch	AQ
S1001	QSW-K0079GEZZ	R Switch, CH Up	AB
S1002	QSW-K0079GEZZ	R Switch, CH Down	AB
S1003	QSW-K0079GEZZ	R Switch, VOL Up	AB
S1004	QSW-K0079GEZZ	R Switch, VOL Down	AB
S1005	QSW-K0079GEZZ	R Switch, Menu/Preset	AB

MISCELLANEOUS PARTS

RDA301	PRDAR0258PEFW	R Heat Sink, IC302	AG
RDA302	PRDAR0160PEFW	R Heat Sink, D309	AF
RDA501	PRDAR0283PEFW	R Heat Sink, IC501	AF
RDA601	PRDAR0224PEFW	R Heat Sink, Q602	AF
RDA700	PRDAR0260PEFW	R Heat Sink, IC701	AH
△ FH701	QFSDH1014CEZZ	R Fuse Holder	AC
△ FH702	QFSDH1013CEZZ	R Fuse Holder	AC
F301	QFS-J2521CEZZ	R Fuse	AF
△ F701	QFS-C3229CEZZ	R Fuse, T3.15A 250V	AD
J405	QTANJ0644CEZZ	R Terminal, 18 pin	AM
P301	QPLGN0441CEZZ	R Plug, 4 pin	AB
P303	QPLGN0741CEZZ	R Plug, 7 pin	AC
P502	QPLGN0603CEZZ	R Plug, 6 pin	AB
P602	QPLGN0641CEZZ	R Plug, 6 pin	AB
P701	QPLGN0207CEZZ	R Plug, 2 pin	AA
P712	QPLGN0269GEZZ	R Plug, 2 pin	AB
P1001	QPLGN0541CEZZ	R Plug, 5 pin	AB

Ref. No.	Part No.	★	Description	Code
P1002	QPLGN0541CEZZ	R	Plug, 5 pin	AB
P1003	QPLGN0341CEZZ	R	Plug, 3 pin	AA
P1004	QPLGN0241CEZZ	R	Plug, 2 pin	AA
P1009	QPLGN0241CEZZ	R	Plug, 2 pin	AA
RMC1001	RRMCU0235CEZZ	R	Remote Receiver	AK
TP201	QLUGP0102PEZZ	R	Lug	AA
	LHLDP1066PE00	R	Holder	AC

**DUNTK9990WET8
PWB-B:CRT UNIT****TRANSISTORS**

Q870	VSBF422////-1	R BF422	AC
Q871	VSBF422////-1	R BF422	AC
Q872	VSBF422////-1	R BF422	AC
Q883	VSBF421////-1	R BF421	AC
Q885	VSBF421////-1	R BF421	AC
Q887	VSBF421////-1	R BF421	AC

DIODES

D811	VHD1SS119//1	R 1SS119	AB
D812	VHD1SS119//1	R 1SS119	AB
D880	VHD1SS119//1	R 1SS119	AB
D881	VHD1SS119//1	R 1SS119	AB
D882	VHD1SS119//1	R 1SS119	AB
D883	VHD1SS82///1A	R 1SS82	AC
D884	VHD1SS82///1A	R 1SS82	AC
D885	VHD1SS82///1A	R 1SS82	AC
D886	VHD1SS82///1A	R 1SS82	AC
D887	VHD1SS82///1A	R 1SS82	AC
D888	VHD1SS82///1A	R 1SS82	AC

CAPACITORS

C871	VCKYPA1HB471K	R 470p 50V Ceramic	AA
C872	VCKYPA1HB471K	R 470p 50V Ceramic	AA
C873	VCKYPA1HB471K	R 470p 50V Ceramic	AA
C875	VCKYPA2HB102K	R 1000p 500V Ceramic	AA
C876	RC-KZ0150CEZZ	R 1000p 3kV Ceramic	AB
C878	VCEAGA2EW106M	R 10 250V Electrolytic	AC
C880	VCKYPA1HB471K	R 470p 50V Ceramic	AA
C881	VCKYPA1HB471K	R 470p 50V Ceramic	AA
C882	VCKYPA1HB471K	R 470p 50V Ceramic	AA

RESISTORS

R879	VRD-RA2BE471J	R 470 1/8W Carbon	AA
R880	VRD-RA2BE471J	R 470 1/8W Carbon	AA
R881	VRD-RA2BE471J	R 470 1/8W Carbon	AA
R882	VRS-VV3DB153J	R 15k 2W Metal Oxide	AA
R883	VRD-RM2HD272J	R 2.7k 1/2W Carbon	AA
R884	VRS-VV3DB153J	R 15k 2W Metal Oxide	AA
R885	VRD-RM2HD272J	R 2.7k 1/2W Carbon	AA
R886	VRS-VV3DB153J	R 15k 2W Metal Oxide	AA
R887	VRD-RM2HD272J	R 2.7k 1/2W Carbon	AA
R888	VRD-RA2BE471J	R 470 1/8W Carbon	AA
R892	VRD-RA2BE102J	R 1k 1/8W Carbon	AA
R893	VRD-RA2BE102J	R 1k 1/8W Carbon	AA
R894	VRD-RA2BE102J	R 1k 1/8W Carbon	AA
R898	VRD-RA2BE471J	R 470 1/8W Carbon	AA
R899	VRD-RA2BE471J	R 470 1/8W Carbon	AA

MISCELLANEOUS PARTS

P851	QPLGN0641CEZZ	R Plug, 6 pin	AB
P882	QPLGN0541CEZZ	R Plug, 5 pin	AB
△ SC881	QSOCV0842CEZZ	R Socket, 9 pin	AH

Ref. No.	Part No.	★	Description	Code
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DUNTKA253WET0 PWB-C:FRONT UNIT

RESISTORS

R1301	VRD-RA2BE471J	R 470	1/8W	Carbon	AA
R1302	VRD-RA2BE471J	R 470	1/8W	Carbon	AA
R3201	VRD-RA2BE561J	R 560	1/8W	Carbon	AA
R3202	VRD-RA2BE122J	R 1.2k	1/8W	Carbon	AA

SWITCH

S3201	QSW-K0079GEZZ	R	Switch		AB
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MISCELLANEOUS PARTS

J1301	QJAKJ0047CEZZ	R	Jack, 7 pin		AD
J1401	QJAKE0143CEZZ	R	Jack, 3 pin R-In		AG
J1402	QJAKE0145CEZZ	R	Jack, 3 pin L-In		AF
J1403	QJAKE0144CEZZ	R	Jack, 3 pin V-In		AF
P1301	QPLGN0742CEZZ	R	Plug, 7 pin		AB
P1401	QPLGN0742CEZZ	R	Plug, 7 pin		AB

MISCELLANEOUS PARTS

△ ACC701	QACCL3025CESA	R	AC Cord		AR
SP301	VSP9050PB25WA	R	Speaker		AM
SP302	VSP9050PB25WA	R	Speaker		AM
	GBFL-0021KJ00		SP Baffle (L)		
	GBFL-0022KJ00		SP Baffle (R)		
	QANTR0018PEZZ	R	Rod Antenna		AQ
	QCNW-0026KJZZ		Connecting Cord		
	QCNW-0028KJZZ		Connecting Cord		
	QCNW-0029KJZZ		Connecting Cord		
	QCNW-2377PEZZ	R	Connecting Cord		AE
	QCNW-2423PEN1	R	Connecting Cord		AF
	QEARC1431CEZZ		Ground-Part		

SUPPLIED ACCESSORIES

ACCESSORIES

RRMCG0029KJSA		Infrared R-C		
TINS-0131KJZZ		Instruction Book		
QPLGJ0113CEZZ	R	Plug		AG

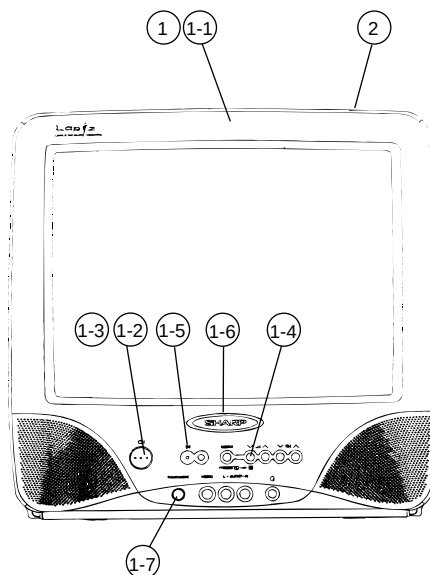
PACKING PARTS (NOT REPLACEMENT ITEM)

SPAKC0108KJZZ	—	Packing Case	—
SPAKP0677CEZZ	—	Wrapping Paper	—
SPAKX0071KJZZ	—	Packing Add.	—
SPAKX0072KJZZ	—	Packing Add.	—
SSAKA0230CEZZ	—	Polyethylene Bag	—
TGAN-0068PEZZ	—	Guarantee Card	—

CABINET PARTS

1	CCABA0095WEA0	Front Cabinet Assembly	
1-1	Not Available	- Front Cabinet	—
1-2	JBTN-0045KJSA	Button	
1-3	MSPRC0003KJFW	Spring	
1-4	JBTN-0046KJSA	Button	
1-5	HDECQ0041KJSA	Decoration Plate	
1-6	HBDGB0011KJSA	Badge	
1-7	JBTN-0047KJSA	Button	
2	GCABB0080KJKA	Cabinet	

Ref. No.	Part No.	★	Description	Code
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